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ABSTRACT

Fourth grade students who had not previously mastered certain reading skills were classified according to level of previous reading achievement, and randomly assigned to 3 treatment groups: (1) goal-setting conference, where subjects met weekly with a monitor and chose goals for the coming week from a prepared list, receiving feedback and reinforcement related to their success in achieving those goals; (2) conference-only group who met with the monitor to review the experimental skills, but set no goals; and (3) the control group who had no conferences but received the same classroom instruction as the others. Attitude, self-esteem, and achievement were measured following 4 weeks of treatment, after which both the goal-setting and conference-only groups set goals. The results of the study were: (1) no significant differences were found for the effect of treatment; (2) previous level of achievement was significant in terms of attitude, self-esteem, achievement, and goal-setting behavior; and (3) there were no significant effects due to the interaction of treatment by previous level of achievement. (Author/KS)

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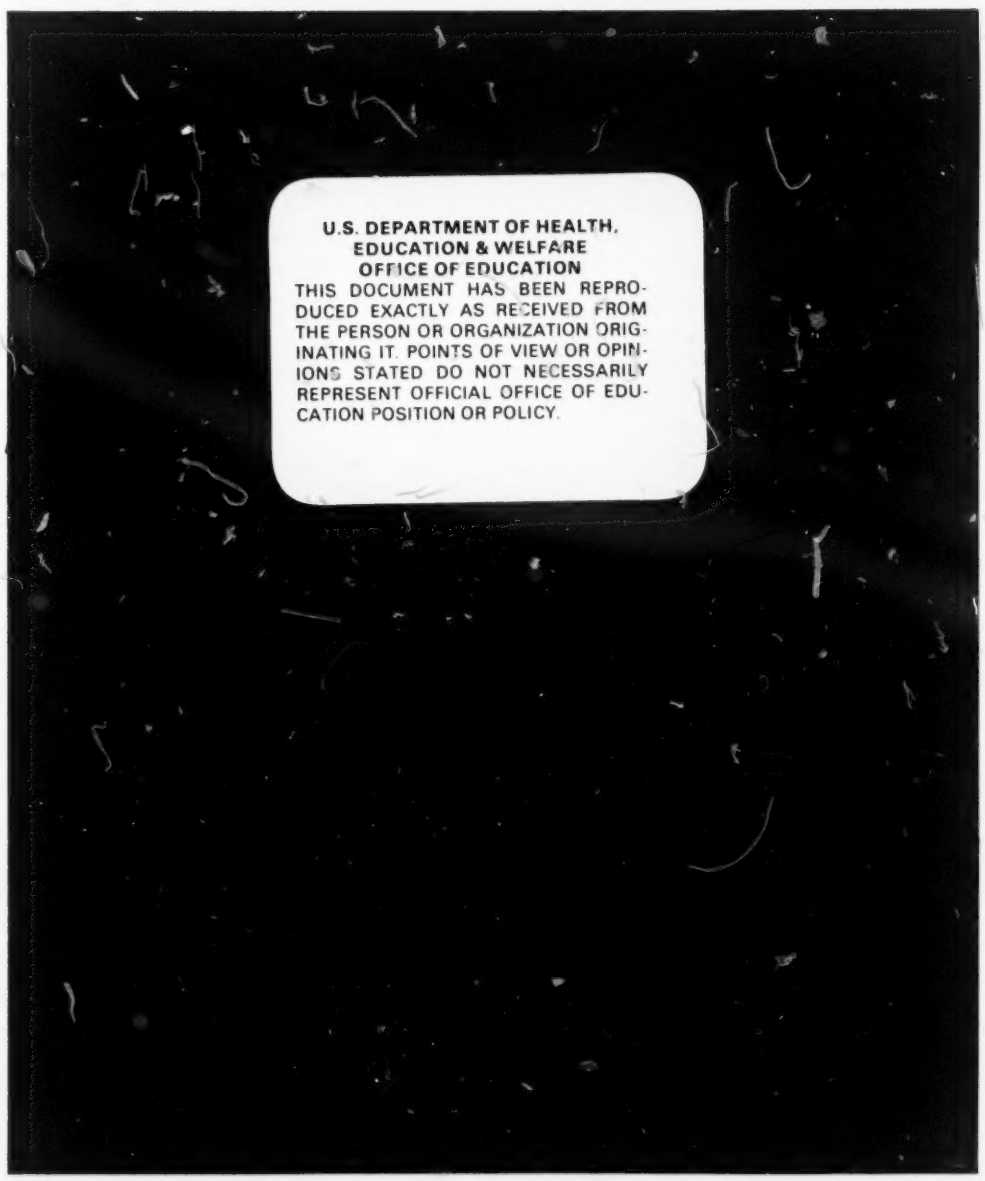
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ATTITUDE, SELF-ESTEEM, ACHIEVEMENT, AND GOAL-SETTING BEHAVIOR ASSOCIATED WITH GOAL-SETTING CONFERENCES IN READING SKILLS

Report from the Project on Variables and Processes in Cognitive Learning

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The Wisconsin Research and Development Center for Cognitive Learning focuses on contributing to a better understanding of cognitive learning by children and youth and to the improvement of related educational practices. The strategy for research and development is comprehensive. It includes basic research to generate new knowledge about the conditions and processes of learning and about the processes of instruction, and the subsequent development of research-based instructional materials, many of which are designed for use by teachers and others for use by students. These materials are tested and refined in school settings. Throughout these operations behavioral scientists, curriculum experts, academic scholars, and school people interact, insuring that the results of Center activities are based soundly on knowledge of subject matter and cognitive learning and that they are applied to the improvement of educational practice.

This Technical Report is from the Project on Variables and Processes in Cognitive Learning in Program 1, Conditions and Processes of Learning. General objectives of the Program are to generate knowledge and develop general taxonomies, models, or theories of cognitive learning, and to utilize the knowledge in the development of curriculum materials and procedures. Contributing to these Program objectives, this project has these objectives: to ascertain the important variables in cognitive learning and to apply relevant knowledge to the development of instructional materials and to the programming of instruction for individual students; to clarify the basic processes and abilities involved in concept learning; and to develop a system of individually guided motivation for use in the elementary school.

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ABSTRACT

This study was designed to investigate the effects of goal-setting conferences on attitude, self-esteem, achievement, and goal-setting behavior.

Fourth grade students at a Milwaukee school who had not previously mastered the reading skills to be studied during the experiment formed the population. Ss were divided into high, medium, and low levels of previous reading achievement. Twenty-one Ss were randomly selected from each achievement level and randomly assigned to one of three treatment groups: goal-setting conference, conference-only, or control.

The goal-setting conference group met once a week with a monitor for an individual conference. Ss chose goals for the coming week from a prepared list and received feedback and reinforcement related to their success in achieving the goals they had set the previous week. The conference-only group also had an individual conference once a week, but set no goals and received no feedback or reinforcement. They simply socialized with the monitor and reviewed the experimental skills to the same extent that the goal-setting group did. The control group had no conferences, but received the same classroom instruction as the other two groups.

Attitude, self-esteem, and achievement were measured after four weeks of treatment. Attitude was measured with the Reading Attitude Inventory developed at the Wisconsin Research and Development Center. Self-esteem was measured with the Self-Esteem Measure which was also developed at the Wisconsin R & D Center. Subtests of the Wisconsin Tests of Reading Skill Development were used to determine achievement on syllabication, accent, and schwa.

During the fifth week, Ss in both the goal-setting and conference-only groups set goals. During that week, data was gathered on their goal-setting behavior. Number of goals set was simply the sum of the goals selected by each S for that week. Accuracy was determined by two quotients. The "attained quotient" was the proportion of goals set that were also attained. The "excess quotient" was the proportion of goals attained that were not set. Confidence was measured with a confidence rating scale developed by Gaa (1970).

The results of the study were as follows:

1. No significant differences were found for the effect of treatment in terms of any of the dependent measures.

2. The effect of previous level of achievement was significant in terms of attitude, self-esteem, achievement, and goal-setting behavior.

3. There were no significant effects due to the interaction of treatment by previous level of achievement.

Chapter I

INTRODUCTION

A critical variable in the educational process is the student's motivation to learn. The child's willing involvement in school activities is a fragile asset that must be nurtured with attention to individual differences. With this in mind, the Wisconsin Research and Development Center for Cognitive Learning has developed a system of individually guided motivation as an integral part of its plan for individually guided education. One of the more important tools of the system of motivation is the adult-child conference with goal setting (Klausmeier, Schwenn, & Lamal, 1970).

This study is part of the Center's ongoing research in developing the goal-setting conference as a classroom technique. The most recent Center study involving goal setting was the Gaa (1970) study in which goal-setting conferences for reading skills were tested in the classroom. The present study is an extension of the Gaa study, undertaken in an effort to increase our

knowledge of the factors underlying the goal-setting process.

The importance of experimentation in the classroom context should not be underestimated. Although goal setting has been the object of considerable experimental study, this has usually been in a laboratory situation. Ultimately, demonstration of the value of goal setting requires experimentation in a practical situation. The present study not only was conducted in classrooms, but tested a procedure that could easily be utilized by a school.

Evaluation of goal-setting conferences as a regular part of the learning process requires an understanding of the underlying motivational implications of the procedure. Motivation can be understood in terms of motives and the effects of those motives. The motives that will be considered here are the desire for knowledge, for positive reinforcement, and for affiliation. These three motives will be examined in terms of their effects on attitude, self-esteem, achievement, and goal-setting behavior.

The three motives suggested here correspond to those proposed by others. Ausubel and Robinson (1969) speak of "cognitive" (knowledge), "ego-enhancement" (reinforcement), and "affiliative" drives underlying achievement motivation. Sears and Hilgard (1964) consider "cognitive" (knowledge), "evaluative" (reinforcement), and "affective" (affiliative) variables in the classroom situation.

Goal-setting conferences derive much of their influence through the activation of these three motives. The student is

encouraged to express his desire for knowledge when he selects goals. Presumably, the goals selected will represent his interests to some extent. Positive reinforcement becomes a motivating force when the student is praised for attaining goals that he has set. Affiliative motives are involved in that the student's interest in the conferences may be due to the opportunity to be with the monitor.

Although knowledge, reinforcement, and affiliation all act as motivational forces in goal-setting conferences, only knowledge and reinforcement are intrinsic to goal setting. Affiliation is a conference variable that is independent of goal setting. Numerous studies have demonstrated that individual conferences have significant positive effects on the academic efforts of students (Klausmeier, Quilling, & Wardrop, 1968; Schwenn, Sorenson, & Bavry, 1970). To control for the possibility that an effect resulting from goal-setting conferences might be due to the conference itself rather than the goal-setting, one group of students in the present study was given conferences which did not include goal-setting.

Various studies have shown that goal-setting conferences influence attitude, self-esteem, and achievement. Kennedy (1968) found that the effect of goal-setting on attitude was dependent on the student's previous level of achievement. When specific goals were used, as in the present study, attitude was improved for high and low achievers, but declined for medium achievers. Coopersmith (1967) found that success in attaining long-term goals

is positively correlated with self-esteem. Gaa (1970) found that goal-setting conferences can be used to increase achievement. None of these effects, however, has been demonstrated conclusively. Gaa's experiment revealed no change in attitude. Neither Kennedy nor Gaa measured the effect of goal-setting conferences on self-esteem. Although Gaa found that goal-setting can increase acnievement, this occurred at only one of two grade levels. Furthermore, Kennedy found no significant effect of goal setting on achievement. The present study, therefore, will examine the effects of goal-setting conferences on attitude, self-esteem, and achievement, as well as the interaction of these effects with the student's previous level of achievement.

Studies have shown that the effects of goal-setting conferences are mediated by the nature of goals which are set. Locke and Bryan (1966a) found, for example, that difficulty of goals was positively correlated with performance in working toward those goals. Gaa (1970), however, found that over a three-week period the number of goals set decreased, while performance increased. This would seem to contradict Locke and Bryan in that difficulty, as reflected in number of goals set, was inversely correlated with performance. Gaa suggested that this finding might have been due to increased "realism" in goal setting, as reflected in increased goal-setting accuracy. That is, students may have set fewer goals as a means of increasing their goal-setting accuracy. The increase in performance may have been unrelated to the decrease in number of goals set.

Reinforcement for achievement could easily have caused the increase in performance independently of the number of goals set or their accuracy. The present study attempts to clarify this issue by reinforcing children during goal-setting conferences only for accurate goals (goals both set and attained). Any improvement in performance may be attributed to increased accuracy of goal setting rather than reinforcement for achievement.

Purpose

The purpose of this study is to determine the effects of goal setting on attitude, self-esteem, achievement, and goal setting behavior. It was carried out in classrooms as part of the daily school routine. This was intended to demonstrate the value of goal-setting when applied to the complex, long-term tasks of which education is comprised.

Method

Subjects were 63 fourth-grade children in a Milwaukee public school. Students were stratified into high, medium, and low levels of previous reading achievement on the basis of standardized test scores. Subjects were then randomly selected from each achievement stratum and randomly assigned to treatment groups. Students in the goal-setting group had an individual conference with a paid monitor once a week for each of four weeks. During the conference, the monitor reviewed the reading skills to be covered in class the

following week. The child then set his own goals, choosing from a prepared list of relevant skills. After the first week, conferences included feedback and reinforcement regarding the student's work during the previous week. Following feedback and reinforcement, goals were set for the succeeding week.

Students in the conference-only group also had individual conferences once a week, but no goals were set during these conferences. Students in the control group received no conferences, but attended the same skill classes as students in the goal-setting and conference-only groups.

At the end of the fourth week, attitude, self-esteem, and achievement tests were administered to all subjects. Comparison of the goal-setting group with the conference-only and control groups permitted determination of the effects of goal setting itself, while comparison of the conference-only and control groups isolated effects of the conference.

During the fifth week of the experiment, both the goal-setting and conference-only groups set goals. Comparison of the two groups with regard to number of goals set, goal-setting accuracy, and confidence in attaining goals assessed the effects of goal-setting practice on goal-setting behavior.

Significance of the Study

This study is designed to examine the effects of goal-setting conferences on attitude toward reading, self-esteem, achievement,

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and goal-setting behavior. The results in terms of attitude, self-esteem, and achievement should provide some understanding of the relation between underlying motivational variables and goal setting in the classroom. The data on goal-setting behavior should indicate how practice in goal setting changes the ways in which students set goals. The findings regarding previous reading achievement will be useful in determining how the effects of goal setting vary across achievement levels.

The major limitation of this study is the short duration of the goal-setting treatment. Since goal setting must be considered a skill, practice is critical. The effects of four weeks of practice are undoubtedly small. Any benefits that can be demonstrated over a four-week period might be far greater with prolonged usage of the technique.

The most significant immediate value of the study is its demonstration of the practical advantages of goal-setting conferences in the classroom. Various scholars (Frymier, 1970) suggest that conventional motivational techniques available to teachers are inadequate. Goal-setting conferences may become a valuable supplement to the presently deficient school repertoire of proven motivational techniques.

Chapter II

REVIEW OF RELATED LITERATURE

The purpose of this chapter is to examine literature related to goal setting in an effort to explore the possible motivational effects of the goal-setting conference. These effects will be analyzed in terms of motives that may be activated by goal-setting conferences. Knowledge, reinforcement, and affiliation will be analyzed as motives that may be aroused by goal-setting conferences. Attitude, self-esteem, achievement, and goal-setting behavior will be examined as variables that may be influenced when the relevant motives are aroused. Goal-setting behavior will be measured in terms of the number of goals set, the accuracy of the goal-setting, and the confidence with which the goals are set.

Motives

Frymier (1970) analyzes motivation in terms of underlying motives and the behavioral variables that are influenced by those motives. He describes motives as relating to the "why" of human behavior. Knowledge, reinforcement, and affiliation will be

reviewed here as motives that may be activated by goal-setting conferences.

The trichotomy of knowledge, reinforcement, and affiliation has been proposed by several authors as a means of understanding the motives that underlie behavior in the educational context. Ausubel and Robinson (1969) describe "cognitive," "ego-enhancing," and "affiliative" drives as basic motives influencing school learning. Cognitive drives are described as the need to "master knowledge." Ego-enhancement consists of factors that increase self-esteem. Reinforcement is often used as a means of strengthening ego-enhancement. Affiliation is dealt with as a means of deriving status vicariously through the approval of a superordinate person or group. By this definition, affiliation tends to be quite similar to reinforcement, in that the "approval" can be seen as a kind of reinforcement.

Sears and Hilgard (1964) consider a similar set of motives in an analysis of teacher-student interaction. "Cognitive" interaction involves intellectual stimulation in the attainment of knowledge. "Evaluative" interaction consists of positive and negative reinforcement. "Affective" interaction refers to the personal affiliation that a teacher can establish with his students through warmth and individual compatibility. The Sears and Hilgard concept of affiliation is more useful than that of Ausubel and Robinson, in that it more clearly distinguishes reinforcement and affiliation.

Knowledge

The motive of acquiring knowledge is often considered in terms of cognitive drive (Ausubel & Robinson, 1969). This drive is described as completely task-oriented. That is, a student whose cognitive drive is aroused, or who is oriented toward the motive of knowledge, derives satisfaction from factors intrinsic to his academic task. This is commonly thought of as curiosity. Many authors contend that the knowledge motive is potentially the most important source of motivation (Ausubel & Robinson, 1969; Murphy, 1970). The knowledge motive is not only very durable, in that there is always more to know, but it also assures that the intent is to learn. Reward and competition motives, on the other hand, may encourage the student to work for the symbols of knowledge (such as high grades) without necessarily maximizing learning (Frymier, 1970).

The knowledge motive is relevant to the goal-setting conferences used in this experiment. Only student-set goals were used in these conferences, thereby allowing the subjects to consider their own interests when setting goals. Permitting the student to choose his own goals is considered quite important by various psychologists. It is commonly suggested that by expanding the student's freedom of choice in his studies, motivation will be increased. Sears and Hilgard (1964) speak of "non-directive instruction" as facilitating the student's

acceptance of his academic tasks. Frymier (1970) also advocates the concept of acceptability of subject matter to the student. Bower, Boyer, and Scheirer (1970) review literature showing that a student's sense of self-control is positively correlated with his academic motivation. Waetjen (1970) stresses the importance of adjusting stimulation and learning experiences to the individual student. Reviewing a broad range of research, including his own, Lefcourt (1966) found that perception of internal control correlated positively with persistence in tasks. Of special interest here is Lefcourt's evidence that low socioeconomic status blacks (used as subjects in the present study) tend to perceive control as external more than do middle class whites. This might suggest that low socioeconomic status subjects would react more slowly to goal setting.

Goal-setting conferences are "non-directive" approaches to "adjusting" education to the individual child insofar as the child selects his own goals freely. The student is thereby allowed to express and act upon his "knowledge motives" to the extent that they exist for him. It is in this sense that goal setting is particularly appropriate as part of a "System of Individually Guided Motivation" (Klausmeier, Schwenn, & Lamal, 1970).

The real test of the degree to which the knowledge motive is activated is in the extent to which achievement is thereby increased. Experimentation has indicated that there is a

relationship between the acceptability of a task to an individual and the individual's performance on that task. Locke (1966) found a linear relation between task liking and task success. He based his conclusions on two experiments which were done in replication of a series of five experiments, all showing this linear relation. Locke and Bryan (1966b) came to a similar conclusion in an experiment that was designed to examine the relationship between the difficulty of goals and resultant performance. They suggested that difficult goals must be acceptable to the subject if an increment in performance is to be expected.

The influence of the knowledge motive in goal-setting conferences may depend to some extent on various characteristics of the student. The previously-mentioned Locke (1966) study indicated that task liking and task success are related. This might suggest that low achievers in a given subject area would have a negative attitude toward that subject. That is, low achievers may react less to knowledge as a motive in the subject matter with which they have difficulty. This relation could, in turn, interact with the student's self-esteem. Korman (1968) conducted three experiments on the relation of task liking to achievement. He found a positive correlation between liking and success only among subjects who scored high in self-esteem. Korman concluded that persons with low self-esteem do not see task achievement as an appropriate goal for themselves. This

suggests that the motivation to learn is most important to high achievers with high self-esteem.

This experiment was designed to consider the possibility that previous level of achievement interacts with the effects of goal setting on performance. Subjects were stratified according to previous level of achievement. If low achievers place a low value on goals that relate to a knowledge motive, then they should also show a smaller increment in achievement than would high achievers after a period of goal-setting training.

Not only might the student's value of knowledge affect the potency of goal setting, but the potency of goal setting could influence the student's value of knowledge. That is, if goal-setting conferences succeed in raising a student's achievement (whether through knowledge, reinforcement, or affiliative motives), that student might then place a higher value on knowledge of the relevant subject area. This should be measurable in terms of attitude toward that subject matter. Much of the literature on this issue tends to support the notion that the knowledge motive or attitude toward learning will benefit from increased scholastic achievement, though there is contrary evidence. It has already been mentioned that Locke (1966) found task success related to task liking. Kiesler, Collins, and Miller (1969) describe the work of Katz as showing a functional relationship between favorable attitudes and success associated with the objects of

those attitudes. Kennedy (1968) examined attitude change in goal-setting experiments using student-set goals. She found that the goal setting resulted in more favorable attitudes for high achievers, and more negative attitudes for low achievers. Further evidence regarding this issue was sought in this experiment through the inclusion of attitude toward reading as one of the dependent measures.

Reinforcement

The reinforcement motive will be examined in terms of both external and internal mechanisms. External reinforcement refers to any reinforcement that is provided by an individual or group other than the subject of that reinforcement. Internal reinforcement involves internalized standards that allow a subject to reward himself with increased self-esteem. That is, if an individual takes pride in his own behavior, he will thereby increase his self-esteem. External reinforcement increases self-esteem only by enhancing a subject's internal view of himself, such that he is internally reinforced.

The effectiveness of external reinforcement in an academic situation is generally measured in terms of increased achievement. Several alternative forms of reinforcement can be compared according to this criterion. This review will consider concrete rewards as compared to social rewards and reinforcement based on group norms as opposed to that based on individually-adjusted norms.

The medium of external reinforcement may be concrete or social. Studies have indicated that concrete rewards are often ineffective. Social rewards, however, usually result in positive effects. Sorenson, Schwenn, and Klausmeier (1969) summarize the results of a study comparing various combinations of conferences and concrete rewards. The purpose of the conferences was to encourage independent reading. The conferences were effective in all comparisons reported. Concrete rewards, however, were described as having no effect either when used without conferences and compared to baseline data or when added to conferences and compared to the effects of conferences without rewards. Clifford (1970) found no effect for concrete rewards used in a competition treatment when compared to a control. A related study reported by Clifford and Cleary (1970) suggested that rewards in competitive contexts are effective only when subjects are grouped homogeneously, as opposed to heterogeneously. A "social propriety" theory was proposed, hypothesizing that competition is socially acceptable only when competitors are considered equals. This implies that social reinforcement plays a role in determining the effectiveness of concrete rewards. Considering the weight of this evidence, the present study relied solely upon social reinforcement.

Reinforcement procedures necessitate some criterion upon which the reinforcement contingencies are based. Reinforcement designed to increase academic achievement usually employs

some standard of achievement as the determinant of whether a subject will receive reinforcement. This standard can be based on group norms or individual norms. The former implies group competition whereas the latter suggests self-competition.

Although group competition is commonly utilized as a motivational technique, research suggests that self-competition is equal to or better than competition with peers. The Clifford (1970) study compared competition with reward and competition in a game setting to a control condition. A ten-day vocabulary learning task was used. Neither immediate acquisition nor retention was increased by either competition treatment. Furthermore, both competition treatments were based on homogeneous grouping of competitors, the condition found by Clifford and Cleary (1970) to maximize the effectiveness of competition with rewards. Clifford and Cleary also found no overall difference between self- and peer-competition. Alschuler (1968) studied a self-competitive game as a motivational technique. He had the individual student set his own goals and determine the basis of grading. This self-competition produced a significant increase in achievement.

Not only is group competition of questionable value as an alternative to self-competition, but it may have detrimental effects in that it induces anxiety. Sears and Hilgard (1964) suggest that competition may result in excessive motivation which increases the difficulty of learning. The most commonly used educational technique of reinforcement based on group norms is letter grading. Frymier (1970) suggests that grades are a

poor method of motivation not only because they may lead to excessive anxiety, but because they may become a substitute for the objective of learning.

In light of the evidence that group competition is unlikely to accrue academic benefits, this experiment utilized a goal-setting procedure in which reinforcement was contingent upon standards set by the individual student himself. This provided for self-competition without creating an anxiety-producing situation. Although there was classroom reinforcement based on group norms, this was applied equally to all three groups because all Ss attended the same classes.

Internal reinforcement refers to an individual's estimation of his own behavior as evaluated against internalized standards. The effects of internal reinforcement can be measured in terms of self-esteem. Coopersmith (1967) has defined self-esteem as "The evaluation which the individual makes and customarily maintains with regard to himself" (pp. 4-5). Of particular relevance to the effects of goal setting is the individual's evaluation of his own academic behavior, including estimations of such characteristics as scholastic ability, diligence, and general level of competence. For this reason, the present study used a self-esteem measure that focuses on these academic behaviors.

The basic mechanism through which goal setting might be expected to influence self-esteem is that of raising achievement,

such that the individual's evaluation of his own behavior is enhanced. The process of raising achievement could be based on the knowledge motive, external reinforcement, or the affiliative motive. Regardless of how performance is improved, one result would be internal reinforcement and the subsequent benefit to self-esteem. The precise and complete feedback of the goal-setting conference facilitates this process of internal reinforcement based on achievement. Coopersmith (1967) noted the importance of clarity both in goals and feedback as a precursor of self-esteem.

The emphasis that goal-setting conferences place upon accurate or realistic goals should also strengthen self-esteem. Ausubel and Robinson (1969) contend that one source of low self-esteem is unrealistic goals which the subject fails to attain. In a "theoretical reformulation" Coopersmith (1967) suggests that "The degree of self-esteem an individual actually expressed would thus reflect the extent to which his successes approached his aspirations in areas of performance that were personally valued" (p. 242). This lends support to the notion that goal setting would benefit self-esteem to the extent that it trains students to set goals accurately. It should be noted that Coopersmith's analysis requires that the successes be in "personally valued" areas of performance. It has already been pointed out that various studies show a relation between previous achievement or task success and task liking (Korman, 1968; Locke, 1966). It is therefore possible that low achievers

might not value academic success, such that they will not increase their self-esteem even if they do increase their achievement. This suggests that the present experiment's stratification by previous level of achievement is important to an analysis of the effects of goal setting on self-esteem.

One final note should be made with regard to both external and internal reinforcement motives. It is possible that the emphasis on student self-direction in the goal-setting conference enhances the efficacy of reinforcement. Bower, Boyer, and Scheirer (1970), in a review of literature on motivation, refer to several studies by Rotter that show a tendency for perception of self-control to be positively correlated with responsiveness to reinforcement. In the present experiment, the subject could easily control the accuracy of his goal setting by adjusting his goals to his achievement. This control might increase the subject's responsiveness to reinforcement for accuracy.

Affiliation

Affiliation will be dealt with here in the sense that Sears and Hilgard (1964) describe it. They refer to warmth and individual compatibility as sources of affiliation. Reviewing the literature, Sears and Hilgard find that student-teacher affiliation has been shown in various studies to be related to

student motivation. Cogan (1958) found affiliative relations between student and teacher to be positively correlated with student productivity on both required and self-initiated work. It is likely that the effects of affiliative motives can be measured in terms of changes in both achievement and attitude. Cogan's suggestion that affiliation between student and teacher increases productivity would imply that achievement should also increase. Sweet (1966) found that the greater spontaneity of free written comments by the teacher, as opposed to stock comments, resulted in not only increased performance, but improved attitude.

The individual conference, based on one-to-one interaction, would be expected to arouse affiliative motives. Several studies provide evidence that this is the case. Schwenn, Sorenson, and Bavry (1970) found that individual adult-child conferences resulted in a significant increase in the independent reading of both high and low achievers. There was no change in reading achievement, but this may have been a function of the brevity of the experiment. An earlier study (Klausmeier, Quilling, & Wardrop, 1968) employing individual conferences demonstrated an increase in both independent reading and reading achievement.

The present study included a group of subjects that received individual conferences without goal setting. The intent

of this design was to determine the contribution of conferences per se to the total effect of goal-setting conferences. Ss in the conference-only group were given the general goal to "Do your best." The purpose here was to insure that students in the conference-only group associated their conferences with academic performance. Studies indicate that general "Do your best" goals are not comparable to specific goals with feedback (Locke, 1967). It is therefore assumed that the conference-only group was effectively without any goal setting.

Literature has been reviewed in consideration of knowledge, reinforcement, and affiliation as motives that may underlie the effects of goal-setting conferences. The knowledge motive is involved to the extent that goal-setting conferences provide the student with some choice as to what he will work on and how much he will do. Though inconclusive, much work suggests that activation of the knowledge motive is less relevant to low achievers than it is to high achievers. In addition, there is some reason to believe that goal setting can improve attitude toward an academic subject by facilitating success in that subject area. In analyzing the possible role of reinforcement in goal-setting conferences, it was found that social rewards are more effective than concrete rewards. Peer competition as a context for reinforcement is of questionable value in comparison with self-competition. Self-esteem may be positively correlated with goal setting as a function of

reinforcement for achievement and accuracy. Low achievers may not benefit, however, if they do not value academic success. Affiliation was found to be related to achievement and attitudinal effects. The conference technique, which capitalizes on affiliative motives, has been shown to be an effective means of increasing achievement.

Goal-Setting Behavior

The effects of goal-setting conferences can be measured not only in terms of attitude, self-esteem, and achievement, but in terms of goal-setting behavior itself. The expectation is that practice in setting goals will influence goal-setting behavior. For this reason, the present experiment included a fifth week during which the goal-setting behavior of those who had set goals for four weeks was compared to that behavior of those who had been attending conferences without goals. The goal-setting behavior variables that will be discussed here are the difficulty of goals set, the accuracy of the goals set in terms of predicting achievement, and the confidence with which those goals were set.

Difficulty of Goals Set

The difficulty of goals set is a function of both the difficulty of individual goals and the total number of goals set. Gaa (1970) studied goal setting in the classroom, measuring difficulty in terms of the number of goals set. He found that students set less goals after three weeks of goal-setting practice, yet their achievement increased. This decrease in goals was thought

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to reflect increased realism in goal setting. Gaa suggests that the students had learned that they could not reach as many goals as they tended to set initially. Although the declining number of goals set was concomitant with an increase in achievement, the two may be seen as unrelated. Locke's studies (Locke, 1967; Locke & Bryan, 1966a, 1966b, 1968, 1969) all showed that when difficulty of goals is experimentally varied, more difficult goals result in higher performance. This suggests that the increased achievement in the Gaa study can not be explained as a result of fewer goals set. Achievement and number of goals set would be independently related to the goal-setting treatment. The present study examines the effects of goal-setting practice on achievement and number of goals set when reinforcement emphasizes accuracy in goal-setting.

Accuracy of Goals Set

Goal-setting accuracy is a crucial variable in the goal-setting process. Accuracy measures the extent to which Ss are committed to attaining their goals. The relation of goal-setting accuracy to achievement is therefore critical, because it shows how commitments to goals relate to achievement. If there is such a relationship, it must be determined whether the correlation is negative or positive. Once this has been done, it remains to be demonstrated that the relationship is causal rather than spurious.

Although several studies show a relationship between goal-setting accuracy and achievement, there is disagreement as to whether this is a negative or positive correlation. Porat and Haas (1969) studied the effects of information on goal setting. They found that added information increased accuracy in goal setting, but that this was negatively correlated with performance. Locke and Bryan (1968) examined the correlates of grade goals expressed by college students. They found that trying for difficult goals not only resulted in a higher level of performance, but in a lower level of goal-setting accuracy as well.

Other studies have indicated that realistic goals may correlate positively with performance. Ausubel and Robinson (1969) suggest that unrealistic goals tend to result in failure. They report a 1940 study by Sears that compared high and low achievers. The high achievers tended to set accurate goals, whereas the low achievers greatly underestimated or overestimated their ability. Gaa (1970) found goal-setting accuracy to be associated with higher achievement when students practiced setting goals in a conference with a monitor.

In addition to being contradictory, these studies fail to determine whether the relationship found is causal. The Gaa study, for example, combines reinforcement for accuracy with reinforcement for any goals achieved, whether or not the goals were set. It is possible, then,that the reinforcement for

accuracy caused the increase in accuracy while the reinforcement for performance caused the increase in achievement. Accuracy could be increased independently of achievement by adjusting the number of goals set rather than the number of goals attained. The decline in number of goals set in the Gaa study suggests that this may have occurred. On the other hand, it is possible that the increased achievement, resulting from reinforcement, caused the increase in accuracy by enabling students to attain more of the goals that they had set.

These contradictory and inconclusive results can be reconciled with the theory that moderate accuracy, rather than high or low accuracy, is related to high achievement. Atkinson and Feather (1966) advocate this explanation in their description of achievement-motivated and failure-threatened personalities. They suggest that achievement-motivated persons will set intermediate goals. Failure-threatened persons, however, set either very low goals, which insure success, or very high goals, which make failure so predictable that it is not meaningful. That is, failure-threatened persons are either excessively accurate or inaccurate in their goals. This theory can be summarized as suggesting that a meaningful commitment to achievement is manifested in a willingness to accept challenging goals which will result in intermediate goal-setting accuracy.

Some studies support this explanation of the relation between accuracy and performance. Maehr and Sjogren (1971), reviewing related literature, find that achievement-oriented persons tend to prefer a probability of success slightly less that .50. They suggest that achievement-oriented Ss would not respond as well to constant reinforcement for success as they would to intermittent reinforcement. This is in concordance with reinforcement scheduling theory, which contends that intermittent reinforcement is more effective for all persons (Brackbill, 1967).

In the goal-setting conferences of the present experiment, reinforcement in goal setting was given only for the accuracy of the previous week's goals in relation to performance during that week. This was used as a means of avoiding the ambiguity of the Gaa study, where the effects of feedback could be confounded with the effects of reinforcement for performance per se.

Confidence in Goals Set

Gaa (1970) found not only a decrease in the difficulty of goals set as accuracy and achievement increased, but also a decrease in the student's confidence that he could reach his goals. The paradox is that as goal-setting practice taught the student to be more accurate, he also became less confident in his accuracy. Gaa suggested that students have an initial tendency to set excessively high goals. The process of becoming more realistic therefore involves the student's recognition that his abilities are lower, relative to the tasks, than he had

previously expected. Presumably this effect would diminish over a longer period of training during which the student could become convinced of his ability to set accurate goals. The present study also measured confidence in goal setting as a means of determining whether the increased emphasis on accuracy in the present study will yield the same decrease in confidence.

This review of literature on goal-setting behavior has considered the difficulty of goals set, the accuracy of goals set, and confidence in the goals set. The difficulty of goals set has been related to both increases and decreases in performance. No firm conclusions can be drawn. Goal-setting accuracy has been shown to increase as a function of goal-setting practice with relevant feedback. The relationship between accuracy and achievement, however, has proven to be an elusive, though significant variable. Although much research indicates that achievement is related to accuracy, neither the direction nor the causality of the relationship has been determined. The only research dealing with goal-setting confidence is that of Gaa (1970). He found confidence to decrease with goal-setting training.

Hypotheses

The review of literature relating to goal setting suggests that goal-setting conferences may influence attitude, self-esteem, achievement, and goal-setting behavior. In addition, there may be interactions of treatment by previous level of achievement for certain of the dependent measures. The present experiment will test the following hypotheses:

A. With respect to attitude toward reading:

1. The goal-setting group will exhibit a more positive attitude than either the conference-only or control group.
2. There will be an interaction between treatment and previous level of achievement such that greater differences in attitude will be found among treatment groups for higher achievers.

B. With respect to self-esteem:

1. The goal-setting group will exhibit higher self-esteem than either the conference-only or control group.
2. There will be an interaction between treatment and previous level of achievement such that greater differences in self-esteem will be found among treatment groups for higher achievers.

C. With respect to achievement:

1. The goal-setting group will exhibit higher achievement than either the conference-only or control group.
2. There will be an interaction between treatment and previous level of achievement such that greater differences in achievement will be found among treatment groups for higher achievers.

D. With respect to goal-setting behavior:

1. The goal-setting group will set a smaller number of goals than the conference-only group.
2. The goal-setting group will show greater accuracy in goal setting than the conference-only group.
3. The goal-setting group will show lower confidence in attaining goals than the conference-only group.

Chapter III

METHOD

Subjects

The subjects of this study were students from the fourth grade of a Milwaukee, Wisconsin elementary school. The school is located near, but not in, the center of Milwaukee. The students were largely from homes of lower-middle socioeconomic status. Both parents were present in 80% of the homes of students. At least one parent was employed in 90% of the homes of students, 30% with both parents employed. Free lunches were provided for 7% of the students. The student body was almost entirely black. All subjects in this experiment were black.

A stratified random sample of 63 Ss was selected, with equal numbers from high, medium, and low achievement levels as defined with the California Reading Test administered by the school to Ss at the end of third grade. The mean grade equivalent score was 3.7, with a standard deviation of .43. The high achievement group ranged from 4.0 to 4.7, the medium from 3.5 to 3.9, and the low group from 2.9 to 3.4. Ss were randomly assigned within each achievement level to goal-setting conference, conference-only, or control groups. No

subject had previously mastered the reading skills to be taught during the experiment.

During the experiment no Ss were dropped. Several, however, had to be excluded from the analyses. The criteria for elimination of Ss from analyses were: incomplete data, failure to complete a conference within two days of scheduling, and absence during one or more weeks of classes. Any one of these three criteria was sufficient basis for exclusion from analyses. Regarding the analyses of Week 4 test data, failure to complete a conference (because of administrative difficulties) and absence from a week of classes required the exclusion of one S from each achievement level within the goal-setting group. One S from each achievement level was excluded at random from each of the other two treatment groups. This left an equal number of Ss in each cell for analyses of Week 4 data (see Table 1). Two additional Ss had to be excluded from analysis of Week 5 data because of an absence and the failure to complete a Confidence Rating Scale. One was a S from the low previous achievement level of the goal-setting group. The other S was from the high previous achievement level of the conference-only group. The Ss that had been randomly excluded from the Week 4 data analysis were replaced for the Week 5 data analysis, because there was no attempt to maintain orthogonality with the further loss of Ss. The resulting number of subjects in each cell is shown in Table 2.

Table 1

Number of Subjects in Each Treatment by
Achievement Group for Week 4 Analysis

Previous Achievement Level	Treatment Group		
	Goal-Setting	Conference-Only	Control
High	6	6	6
Medium	6	6	6
Low	6	6	6

Table 2

Number of Subjects in Each Treatment by
Achievement Group for Week 5 Analysis

Previous Achievement Level	Treatment Group	
	Goal-Setting	Conference-Only
High	6	6
Medium	6	7
Low	5	7

Monitor

A monitor was hired to conduct all conferences. The school principal selected her from among interested parents in the neighborhood. She was black, roughly of the same socioeconomic status as most of the subjects, and the mother of school-age children. The Wisconsin R & D Center paid the monitor's wages, which were equivalent to those paid by the school to teacher's aides. The experimenter trained the monitor in the conference procedure for two weeks prior to the experiment.

Materials

Student Goal-Setting Checklist

Goals were selected by the Ss from a list that the monitor read to them. The list was developed by the teachers involved in the experiment. It covered all the skills that were to be taught in the reading skills classes during the experimental period. Goals were ordered according to the chronological sequence in which they were to be taught. Three skill constellations were included in the list: syllabication, accent, and schwa. All goals included in the list were specific, because both laboratory and classroom studies have shown that specific goals are more effective than general goals (Locke, 1967; Locke & Bryan, 1966a, 1968; Kennedy, 1968). There were two basic types of goals. One required "knowing" a concept or rule. The other required a behavioral capacity to

perform a task. The latter type of goal allowed the student to choose from among three possible frequencies, given he chose to set the goal. These frequencies were: "Some of the time," "Most of the time," and "Almost all of the time."

The Student Goal-Setting Checklist was used to set goals in goal-setting conferences during Weeks 1 through 5. It was also used as a point of reference for feedback and reinforcement in goal-setting conferences in Weeks 2 through 5. For this purpose, the Student Goal-Setting Checklist of the previous week was compared with the Checklist for Teacher Evaluation of Goals Attained (see below). The Student Goal-Setting Checklist appears in Appendix A.

Goal Reminder Sheet for Student-Set Goals

The Goal Reminder Sheet for Student-Set Goals was identical, except in title, to the Student Goal-Setting Checklist. At the conclusion of each goal-setting conference, the monitor checked S's selection of goals on a Goal Reminder Sheet, giving this to S. This sheet not only served to help the child remember his goals, but provided him with tangible evidence that he really had committed himself to a set of goals. The first page of the Goal Reminder Sheet for Student-Set Goals appears in Appendix B. The subsequent five pages are identical to those of the Student Goal-Setting Checklist.

Checklist for Teacher Evaluation of Goals Attained

The Checklist for Teacher Evaluation of Goals Attained was identical, except in title, to the Student Goal-Setting Checklist. At the end of each week the teachers evaluated the progress of the students they had taught that week, checking off goals that had been attained. Evaluation checklists were obtained for both goal-setting and conference-only Ss so that the teachers would not be able to distinguish between the two groups. These lists were used as a basis for the feedback and reinforcement that was provided in goal-setting conferences for Weeks 2 through 5 (see above under "Student Goal-Setting Checklist"). The first page of the Checklist for Teacher Evaluation of Goals Attained is in Appendix C. The subsequent five pages are identical to those of the Student Goal-Setting Checklist.

Goal-Setting Confidence Rating Scale

Gaa's (1970) Confidence Rating Scale was used in every goal-setting conference. After setting goals for the coming week, Ss were asked to rate their certainty of reaching their goals and the extent to which they would be able to do the goal-related skills without help. Five choices, varying according to degree of confidence, were offered for each of the two questions. The Goal-Setting Confidence Rating Scale is illustrated in Appendix D.

Reading Attitude Inventory

Attitude toward reading was tested at the end of Week 4 with the Reading Attitude Inventory (RAI). The three questions of the Inventory related to reading at school and home and to studying reading skills. Simple cartoon representations of three different facial expressions (happy, neutral, sad) followed each question as alternative responses. This inventory was developed at the Wisconsin Research and Development Center for Cognitive Learning. A pilot study was carried out on the inventory at Wilson School in Janesville, Wisconsin. The results indicated that the three items must be considered separate measures, since they do not relate to a single factor. The RAI is shown in Appendix E. Testing instructions are in Appendix G.

Self-Esteem Measure

Self-esteem, in relation to academic competence and self-discipline, was measured at the end of Week 4 with the Self-Esteem Measure (SEM). The 12 items used were selected from several more general self-esteem measures (Coopersmith, 1967; Gordon, 1970; Parker, 1970; Piers & Harris, 1969). Ss were instructed to respond "yes" or "no" according to whether the question "tells about you." A reliability of .81 was found for fourth graders on a 16-item preliminary form of the SEM in a pilot study at Wilson School in Janesville, Wisconsin. The present study eliminated the four least discriminating items from the preliminary form as a means of minimizing testing time. The SEM is Appendix F. Testing instructions are in Appendix G.

Achievement Tests

The Wisconsin Tests of Reading Skill Development (WTRSD) for syllabication, accent and schwa were administered to all Ss at the end of Week 4. The WTRSD battery was developed at the Wisconsin Research and Development Center for Cognitive Learning. Form 2 was used in the present experiment. The tests are basically performance tests, presenting matching questions to test for knowledge of syllabication, accent, and schwa.

Procedure

Three different treatments were used in this experiment. In the goal-setting conferences the students set goals and received feedback and reinforcement for goals achieved. The conference-only treatment consisted of conferences without goal setting or feedback and reinforcement. The control treatment involved nothing more than the regular classroom instruction that all Ss received. The experimental period included four weeks (Weeks 1 through 4) during which these different treatments were employed, and one week (Week 5) during which both goal-setting and conference-only groups received the goal-setting treatment.

Subjects were drawn from four different classes. Teacher effects were avoided by rotating instructional groups every week. This insured that over the initial four-week period all groups had been taught for one week by each teacher. A few individuals changed

instructional groups during the experiment according to the discretion of the teachers. All grouping was homogeneous with regard to ability and performance on the relevant skills.

Classroom instruction was based on the Wisconsin Design for Reading Skill Development. Syllabication, accent, and schwa all fall within the Word Attack skill area of the Wisconsin Design. The homogeneous grouping and regrouping is a normal part of the instructional program of the school. While teacher rotation had not previously been so regular, students had normally changed teachers frequently for various kinds of instruction.

Instruction was structured to insure that subjects would be able to reach any goals that they had set. Teachers were told to follow their usual teaching procedures, provided that students were allowed to progress at their own pace and that syllabication, accent, and schwa would be the only skills taught during the reading skills periods. The teacher-developed Student Goal-Setting Checklist was designed to be parallel in content to the classroom instruction. That is, not only were all goals covered in class, but they were introduced in the same order that they appeared on the Student Goal-Setting Checklist. This provided for a close correspondence between goal setting and learning. In addition, the homogeneous grouping and regrouping, a part of the usual instructional procedures in this school, allowed each student to progress at his own rate. Any student that progressed more or less rapidly than his group

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was placed in a more appropriate group. Furthermore, students were often allowed to work as individuals on an assigned task. At other times, a small group of students worked with a teacher's aide. This combination of factors incorporated enough instructional flexibility to give each student a meaningful opportunity to work toward his individually set goals.

Classroom instruction was observed once each week by the experimenter, as a means of certifying that all subjects were receiving the same form of instruction, though the rate of instruction might vary according to ability groups. In addition, the experimenter checked to be sure that no reference was made in class to goal setting or the goal-setting experiment. The experimenter never told the teachers which treatments individual students were receiving. This could be inferred if a S displayed his Goal Reminder Sheet in class. The teachers reported, however, that this rarely occurred.

A sample of experimental conferences was observed, as well as tape-recorded. The experimenter observed the first few conferences every Monday, in addition to some make-up conferences on Wednesdays. The conference monitor recorded approximately 14 conferences every week, according to a schedule provided by the experimenter. This insured that at least one conference for each S in the Goal-Setting and Conference-Only groups was recorded during the first four-week period. All observations and recordings of conferences were rated by the experimenter according to Conference Evaluation Checklists

which had been the basis of training for the monitor. These Conference Evaluation Checklists appear in Appendix H.

All conferences were conducted in a reading room that was never used by more than three other persons. Conferences were completed in five to ten minutes. Ss attended their conference according to a previously determined random schedule. The schedule was designed so that no S missed a reading skills period.

Goal-Setting Conferences

Goal-setting conferences generally followed the outline presented in the Conference Evaluation Checklists (Appendix H). Introductory conferences were given during Week 1 for the goal-setting treatment group, and during Week 5 for the conference-only treatment group. All other goal-setting conferences followed the feedback conference outline.

The monitor began introductory conferences with an explanation of goal setting. She defined goal setting, provided examples, and asked S for examples. Following this, she briefly reviewed the skill that S would be studying in class. This was syllabication in Week 1 introductory conferences and accent or schwa (depending on the progress of S) in Week 5 introductory conferences. Next, the monitor and S set goals for the coming week. The Student Goal-Setting Checklist was read to S by the monitor, thereby avoiding effects of reading ability. S was allowed to set goals until he rejected three consecutive goals, after which the monitor concluded the goal setting.

No reinforcement was provided during introductory conferences. The monitor expressed no reaction to S's goals except to emphasize the importance of being able to reach all the goals selected. This usually served to prevent S from setting goals far beyond what could be covered in class. After completing the goal setting, the monitor read the Confidence Rating Scale to S and recorded his responses. At the conclusion of the conference the monitor filled out a Goal Reminder Sheet and gave it to the child. She concluded the conference by encouraging S to "Do your best and be sure to reach all your goals."

Feedback goal-setting conferences were given to Ss in the goal-setting group from Week 2 through Week 5. These conferences began with feedback relating the goals set for the previous week to the teacher's evaluation of S's performance. The monitor would point out, referring to specific goals, which goals had been set and not attained, which had been attained and not set, and which had been both set and attained. After the first week of conferences it was found that the distinction between reaching a goal "Most of the time" and reaching it "Almost all of the time" was ambiguous to both teachers and students. The "Most" versus "Almost all" distinction was therefore ignored in comparing goals set to goals attained.

In pointing out goals which had been set and not attained, the monitor suggested that fewer goals should be set and S should

work harder in the future. When goals were attained but not set, the monitor suggested that more goals should be set. Unlike Gaa's (1970) study, positive reinforcement was related exclusively to those goals which were both set and attained. The monitor's reinforcing comment might be, "You said you would do this and your teacher said you did. Very good!" In this way, it was intended that the feedback and reinforcement would concentrate on accuracy in goal setting. The two alternatives of adjusting goals to performance and adjusting performance to goals were given equal emphasis in the feedback. Since performance itself was only reinforced in relation to accuracy of goal setting, this procedure avoided effects that related directly to reinforcement independent of goal setting. The net effect in terms of positive and negative reinforcement, as judged by the experimenter's observations, was a low or moderate amount of positive reinforcement and virtually no negative reinforcement.

Following the feedback with reinforcement, the monitor reviewed any new skills that the child would be working on during the next week. This was done in the same manner as in the introductory goal-setting conferences. Often S had not reached a new skill, in which case this part of the conference could be deleted.

At this point in the conference new goals were set. The monitor followed exactly the same procedure used in the introductory goal-setting conferences with two exceptions. First, she did not

read those goals that had already been achieved either "Most of the time" or "Almost all of the time." Second, S was reminded of the trends of his previous week's goals in relation to his previous week's achievement whenever the monitor felt this was necessary. That is, if S seemed to be repeating a pattern of an excessive or deficient number of goals, the monitor would reiterate the relevant implications of the previously given feedback. The Confidence Rating Scale, Goal Reminder Sheet, and concluding "Do your best" encouragement were all incorporated into the feedback conferences just as they were in the introductory conferences.

Conference-Only Conferences

Conference-only conferences were given to Ss in the conference-only treatment groups during Weeks 1 through 4. The first half of the conference-only conference was devoted to socializing with S. The monitor established rapport and carried on a brief conversation with S. Following this, the monitor discussed the skill that S had worked on most recently in class. This skill was identified either by asking S or by inference from the Teacher Evaluation Checklist. Skill discussions were equivalent for both goal-setting and conference-only groups. First the monitor explained and gave some examples of the skill. Then she asked S for examples of the skill. At no time did the monitor refer to any of the specific goals on the Goal-Setting Checklist. The conference was concluded with an encouragement such as "Do your best this week." The review of skills and

"Do your best" encouragement were included to insure that S would relate his affiliation with the conference monitor to his academic efforts in the reading skills area. There was no reinforcement in these conferences. The avoidance of any mention of specific goals was designed to preclude implicit goal setting of the kind hypothesized by Locke (1967) and Locke and Bryan (1966b, 1969). These studies suggest that specific information regarding tasks will result in goal setting even when S is not instructed to set goals.

Schedules for both goal-setting and conference-only conferences are shown in Table 3.

Design

The experimental design for Weeks 1 through 4 was a 3 x 3 randomized block design, with three levels of previous reading achievement (high, medium, and low) and three treatment conditions (goal-setting conference, conference-only, and control). The design for Week 5 was a 3 x 2 randomized block design with three levels of reading achievement and two treatment conditions (goal-setting practice during Weeks 1-4 and conference-only during Weeks 1-4). These designs are diagramed in Tables 4 and 5.

Previous reading achievement was based on scores on the California Reading Test. Grade equivalent scores were divided into high and low quarters and a middle half. The large medium group was necessitated by clustering of students in the middle range of scores. Twenty-one

Table 3

Schedules for Treatment Groups

	Treatment Group		
Week and Days	Goal-Setting	Conference-Only	Control
Week 1 Monday or Tuesday	Introductory Goal-Setting Conference	Conference	Classroom Instruction Only
Week 2 Monday or Tuesday	Feedback Goal-Setting Conference	Conference	Classroom Instruction Only
Week 3 Monday or Tuesday	Feedback Goal-Setting Conference	Conference	Classroom Instruction Only
Week 4 Monday or Tuesday	Feedback Goal-Setting Conference	Conference	Classroom Instruction Only
Week 4 Friday	Attitude, Self-Esteem, & Achievement Tests	Attitude, Self-Esteem, & Achievement Tests	Attitude, Self-Esteem, & Achievement Tests
Week 5 Monday or Tuesday	Feedback Goal-Setting Conference	Introductory Goal-Setting Conference	

Table 4

Experimental Design for Weeks 1 through 4

Previous Achievement Level	Treatment Group		
	Goal Setting	Conference Only	Control
High	←		→
Medium	←		→
Low	←		→

Note.- Arrows refer to random assignment.

Table 5

Experimental Design for Week 5

Previous Achievement Level	Treatment Group	
	Goal Setting	Conference Only
High	←	→
Medium	←	→
Low	←	→

Note.- Arrows refer to random assignment.

Ss were randomly selected from each of these three achievement groups. Having thereby blocked by previous reading achievement level, an equal number of Ss from each level was randomly assigned to each of the three treatment groups.

Chapter IV

RESULTS

Scoring

Responses on each of the three Reading Attitude Inventory (RAI) items were weighted 3 for "happy," 2 for "neutral," and 1 for "sad." No attempt was made to maximize item intercorrelation because the pilot study had shown these three items to be unrelated. The experiment verified this, yielding the intercorrelations of -.28 for items 1 and 2, .22 for 1 and 3, and -.16 for 2 and 3.

Self-Esteem Measure (SEM) responses were weighted by the Method of Reciprocal Averages so to maximize the internal consistency of the total scale. Item weights were derived using the RAVE computer program (Baker, 1969). Items were given a maximum weight of three, with higher scores reflecting higher self-esteem. Weighted responses were summed for each S, yielding a total possible of 32. The Hoyt reliability of the weighted inventory was .66. Derived weights for each item are noted in Appendix F.

WTRSD subtests were scored as directed in the "Test Administrator's Manual" developed at the Wisconsin Research and Development

Center for Cognitive Learning. The total scores possible on each of the subtests were 15 for syllabication, 20 for accent, and 18 for schwa.

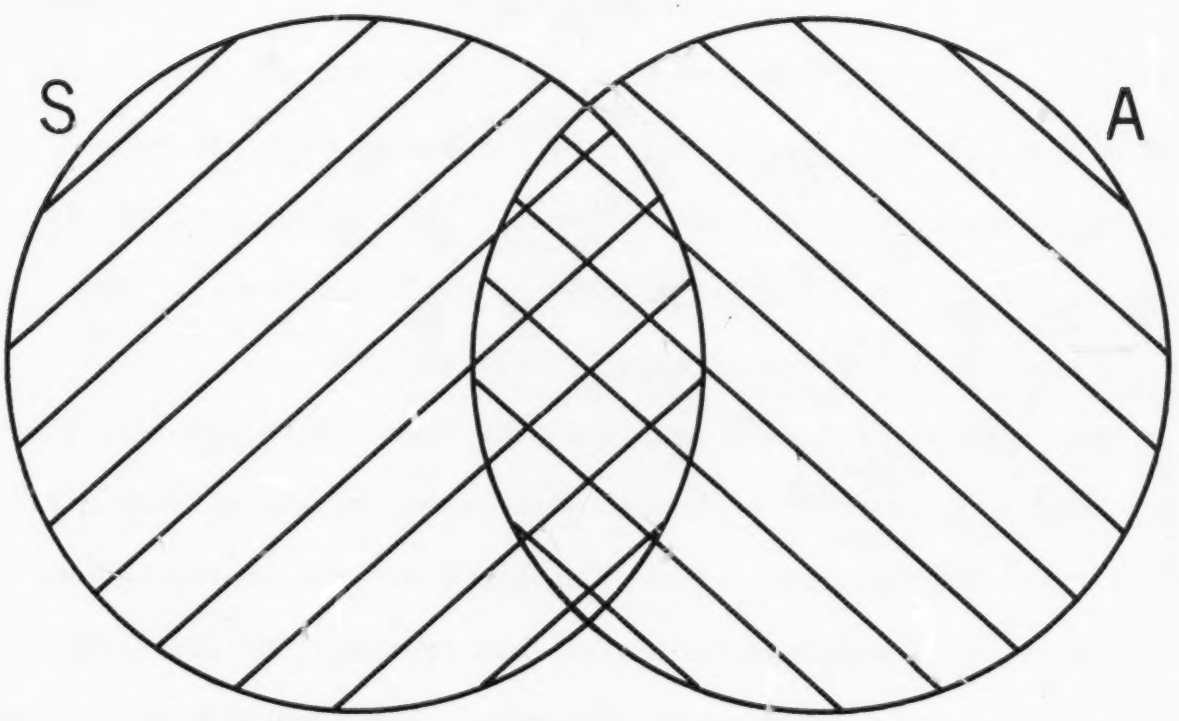
The number of goals set (S) during Week 5 was computed by adding the number of goals checked on the Week 5 Goal-Setting Checklist. A weight of 2 was given to "Almost all of the time" and "Most of the time," while all other choices received a weight of 1.

An "attained quotient" and an "excess quotient" were computed using the number of goals set, the number of goals attained, and the number of goals both set and attained. The number of goals attained (A) during Week 5 was computed exactly the same way as the number of goals set, except that the Teacher Evaluation Checklist was used. The number of goals both set and attained (I) for Week 5 was the intersection of the goals set with the goals attained. The attainment quotient for Week 5 was computed by dividing the number of goals both set and attained by the number of goals set (I/S). This indicates the extent to which S attained those goals that he had set. The excess quotient was the difference between the number of goals attained and the number of goals both set and attained, divided by the number of goals attained ((A-I)/A). This indicates the extent to which S attained goals in excess of those which he had set. Figure 1 represents the number of goals set, the number of goals attained, and their intersection (goals both set and attained).

Set (S) //

Attained (A) = \\

Set and Attained (I) = ⋈



$$\text{Attained Quotient} = \frac{I}{S}$$

$$\text{Excess Quotient} = \frac{A - I}{A}$$

Fig. 1. Venn diagram representation of attained quotient and excess quotient scores.

Confidence scores were determined with the Confidence Rating Scale using a weight of one to five for each question, five indicating maximal confidence. The two questions were summed for each S, yielding a total possible score of ten.

Analysis

Separate multivariate and univariate analyses of variance were carried out on the following dependent measures: (a) scores on the items of the Reading Attitude Inventory, (b) score on the Self-Esteem Measure, (c) scores on the syllabication, accent, and schwa subtests of the WTRSD Battery, (d) number of goals set in Week 5, (e) attained quotient for Week 5, (f) excess quotient for Week 5, and (g) score on the confidence scale for Week 5. The significance level adopted for all tests was .05.

The unequal cell frequencies of the Week 5 data required that each source of variance be tested after removing the effects attributable to other sources. Week 5 analysis was run in two orders: (a) treatment, previous achievement, and treatment by previous achievement; (b) previous achievement, treatment, and treatment by previous achievement. Since the results using the two orders were essentially the same, only the results of the first order are reported.

Reading Attitude Inventory

Means and standard deviations for Reading Attitude Inventory items by treatment group and previous achievement level are reported

in Table 6. A multivariate analysis of variance was carried out using the scores on the three RAI items. The results of this analysis are reported in Table 7

An examination of Table 7 reveals no significant differences in attitude due to treatment, either in comparing goal setting to conference-only and control, or when comparing conference-only to control. In neither of these cases did the effect approach significance. The same was true of the interaction of treatment by previous level of achievement. Table 7 does, however, show the effect of previous level of achievement on attitude to be significant at the .05 level. Univariate analyses of scores on each of the three Reading Attitude Inventory items were also carried out. For these analyses the significance level was .017, determined by dividing .05 by the number of univariate analyses, 3 (Miller, 1966). None of the effects for individual items reached this level.

Self-Esteem Measure

Means and standard deviations on the Self-Esteem Measure (SEM) are shown in Table 8. The results of the univariate analysis of variance carried out on the scores on the SEM is presented in Table 9.

The analysis revealed no significant differences due either to treatment or to the interaction of treatment by previous level of achievement. The effect of previous level of achievement was significant. Analysis based on Scheffe's post hoc comparison method (Hays, 1963) showed the high previous achievement level to be significantly different ($p < .05$) from both the medium and the low

Table 6

Means and Standard Deviations[a] for Reading Attitude Inventory (RAI) Items by Treatment Group and Previous Achievement Level

Previous Achievement Level	Treatment Group						All	
	Goal Setting		Conference Only		Control			
	MN	SD	MN	SD	MN	SD	MN	SD
High								
RAI 1	2.83	.41	2.50	.55	2.50	.84	2.61	.68
RAI 2	2.17	.75	2.12	.75	2.17	.75	2.17	.70
RAI 3	2.17	.75	2.67	.52	2.50	.84	2.44	.75
Medium								
RAI 1	2.17	.98	2.33	.82	1.83	.75	2.11	.85
RAI 2	2.83	.41	2.67	.52	2.67	.52	2.72	.48
RAI 3	2.17	.75	1.67	.82	1.67	.82	1.83	.83
Low								
RAI 1	2.33	.82	2.00	1.10	2.33	1.03	2.22	.94
RAI 2	2.00	1.10	2.00	.89	2.33	.82	2.11	.89
RAI 3	2.33	.82	2.83	.41	2.33	1.03	2.50	.90
All								
RAI 1	2.44	.86	2.28	.85	2.22	.86	2.31	.82
RAI 2	2.33	.80	2.28	.72	2.39	.68	2.33	.75
RAI 3	2.22	.80	2.39	.80	2.17	.93	2.26	.82

[a]All standard deviations in this and following tables are calculated on the basis of the raw scores of the appropriate cell, column, row, or total population.

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Table 7

Multivariate Analysis of Variance of Scores on Reading Attitude Inventory (RAI) Items

Source	df	F	p<
Treatment			
Goal Setting vs. (Conf. Only + Control)	3,43	.28	.84
Conference Only vs. Control	3,43	.27	.85
Previous Level of Achievement	6,86	2.45	.031*
Treatment by Previous Achievement	12,114	.62	.82

* Significant at the .05 level.

Table 8

Means and Standard Deviations for the
Self-Esteem Measure (SEM)

Previous Achievement Level	Treatment Group						All	
	Goal Setting		Conference Only		Control			
	MN	SD	MN	SD	MN	SD	MN	SD
High	30.27	1.21	29.00	2.53	28.00	3.29	29.22	2.60
Medium	23.67	4.23	26.50	3.15	26.50	3.21	25.56	3.62
Low	27.67	1.63	25.83	3.66	25.67	4.84	26.39	3.53
All	27.33	3.90	27.11	3.27	26.72	3.75	27.06	3.59

Table 9

Univariate Analysis of Variance of Scores
on the Self-Esteem Measure (SEM)

Source	df	F	p<
Treatment			
Goal Setting vs. (Conf. Only + Control)	1,45	.19	.66
Conference Only vs. Control	1,45	.13	.72
Previous Level of Achievement	2,45	6.22	.004*
Treatment by Previous Achievement			
Goal Setting vs. (Conf. Only + Control)	2,45	2.97	.06
Conference Only vs. Control	2,45	.08	.92

* Significant at the .05 level.

levels as well as from the average of the medium and low levels. There was no significant difference between the medium and low levels of previous achievement in terms of SEM scores.

Achievement Tests

Means and standard deviations on the three WTRSD subtests (syllabication, accent, and schwa) are shown in Table 10. The results of a multivariate analysis of variance on scores for these subtests are shown in Table 11.

The multivariate analysis revealed no significant effects due to treatment or the interaction of treatment by previous level of achievement. There was, however, a significant effect due to previous level of achievement. The univariate analyses of variance of syllabication, accent, and schwa scores of the effect of previous level of achievement on each of the WTRSD subtest scores revealed significant effects (using a .05/3 = .017 significance level) only for syllabication and schwa. Mean scores on the three WTRSD subtests by previous level of achievement are shown in Figure 2.

Although there was no significant effect due to treatment, it should be noted that the mean score for the goal-setting group is the lowest of the three treatment groups for syllabication, between the other two groups for accent, and the highest of the three groups for schwa. The skills were presented in that order (syllabication, accent, and schwa) in the classroom instruction.

Table 10

Means and Standard Deviations for WTRSD Tests (Syllabication, Accent, and Schwa) by Treatment Group and Previous Achievement Level

Previous Achievement Level	Treatment Group						All	
	Goal Setting		Conference Only		Control			
	MN	SD	MN	SD	MN	SD	MN	SD
High								
Syllabication	13.67	1.51	14.17	1.33	14.00	1.10	13.94	1.26
Accent	13.00	2.83	13.67	2.73	12.67	3.88	13.11	3.03
Schwa	13.17	2.23	11.17	3.43	13.00	2.97	12.44	2.89
Medium								
Syllabication	10.50	3.83	11.33	3.93	12.67	3.01	11.50	3.52
Accent	11.50	5.17	13.33	2.73	12.33	1.97	12.39	3.43
Schwa	8.83	3.76	10.00	2.53	7.67	4.50	8.83	3.60
Low								
Syllabication	10.17	3.06	10.83	1.94	9.83	3.25	10.28	2.67
Accent	11.17	1.94	10.17	1.60	10.50	3.39	10.61	2.33
Schwa	8.50	2.07	8.00	2.53	5.33	1.37	7.28	2.40
All								
Syllabication	11.44	3.22	12.11	2.91	12.17	3.05	11.91	3.02
Accent	11.89	3.46	12.39	2.79	11.83	3.15	12.04	3.10
Schwa	10.17	3.42	9.72	3.01	8.67	4.47	9.52	3.67

Table 11

Multivariate Analysis of Variance of
Scores on WTRSD Tests
(Syllabication, Accent, and Schwa)

Source	df	F	p<
Treatment			
Goal Setting vs. (Conf. Only + Control)	3,43	1.05	.38
Conference Only vs. Control	3,43	.50	.68
Previous Level of Achievement	6,86	4.91	.0003*
Treatment by Previous Achievement	12,114	.74	.71

* Significant at the .05 level.

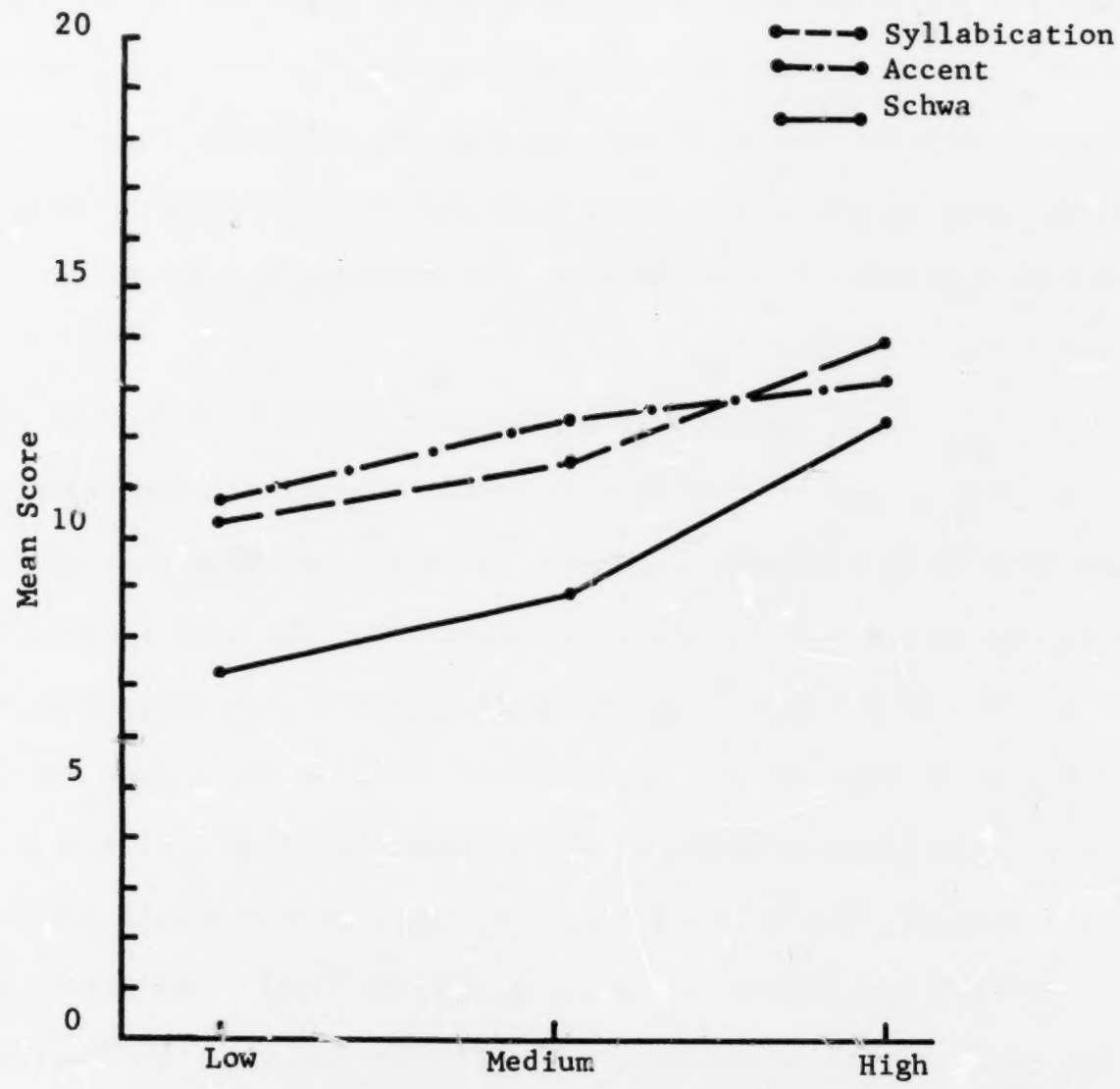

Fig. 2. Means on the syllabication, accent, and schwa WTRSD Tests by previous level of achievement.

Goal-Setting Behavior

Means and standard deviations for number of goals set, attained quotient, excess quotient, and confidence are shown in Table 12. Means for variables used to calculate the accuracy and excess quotients (number of goals set, number of goals attained, and number of goals both set and attained) are shown in Table 13. A multivariate analysis of goal-setting behavior, including number set, attained quotient, excess quotient, and confidence, yielded the results shown in Table 14.

There were no significant differences due to treatment or to the interaction of treatment by previous level of achievement. With respect to treatment, however, it should be noted that most of the means were in the predicted direction. The goal-setting group set a lower mean number of goals (7.9 for goal setting versus 9.6 for conference only). Goal-setting accuracy was higher for the goal-setting group in terms of the attained quotient (.61 versus .54). However, the goal-setting group had a higher excess quotient than did the conference-only group (.46 versus .37), reflecting a lower goal-setting accuracy in terms of this measure. The confidence means were again in the hypothesized direction, goal setting being lower than conference only (6.06 versus 6.75).

The multivariate analysis revealed a significant effect due to previous level of achievement. Univariate analyses of number of goals set, attained quotient, excess quotient, and confidence

Table 12

Means and Standard Deviations for Number of Goals Set, Attained Quotient, Excess Quotient, and Confidence Score by Treatment Group and Previous Achievement Level for Week 5

Previous Achievement Level	Treatment Group: Goal Setting MN	Goal Setting SD	Conference Only MN	Conference Only SD	All MN	All SD
High						
Set	9.50	4.46	11.17	4.79	10.33	4.50
Attained	1.00	.00	.91	.19	.95	.14
Excess	.40	.30	.34	.30	.37	.28
Confidence	6.50	1.52	7.33	1.97	6.92	1.73
Medium						
Set	6.33	4.03	7.00	2.65	6.69	3.22
Attained	.68	.28	.57	.54	.62	.43
Excess	.49	.32	.59	.36	.55	.33
Confidence	5.50	.164	6.86	1.68	6.23	1.74
Low						
Set	8.00	6.82	10.86	3.81	9.67	5.19
Attained	.05	.07	.20	.32	.14	.25
Excess	.50	.50	.17	.37	.31	.44
Confidence	6.20	3.63	6.14	2.80	6.17	3.01
All						
Set	7.94	4.98	9.60	4.08	8.84	4.53
Attained	.61	.43	.54	.47	.57	.44
Excess	.46	.35	.37	.38	.41	.36
Confidence	6.06	2.25	6.75	2.15	6.43	2.19

Table 13

Means for Number of Goals Set, Number of Goals Attained, and Number of Goals Both Set and Attained by Treatment Group, Previous Achievement Level, and Week

Previous Achievement Level	Treatment Group									
	Goal Setting					Conference Only				
	Week					Week				
	1	2	3	4	5	1	2	3	4	5
High										
Set	25.17	3.17	10.50	6.85	9.50	--	--	--	--	11.17
Attained	18.67	3.17	5.33	1.85	16.50	17.67	3.85	6.00	2.17	15.67
Set and Attained	16.67	2.17	4.67	.00	9.50	--	--	--	--	9.67
Medium										
Set	16.67	2.33	10.85	7.50	6.33	--	--	--	--	7.00
Attained	16.85	4.33	3.85	5.50	8.33	10.85	7.00	5.00	6.00	9.42
Set and Attained	13.00	1.33	3.17	2.17	3.85	--	--	--	--	4.14
Low										
Set	15.85	5.17	11.17	6.33	8.00	--	--	--	--	10.86
Attained	13.50	4.17	2.85	9.17	2.20	15.33	4.67	2.50	7.85	3.00
Set and Attained	6.85	2.50	1.67	3.85	.60	--	--	--	--	1.00

Table 14

Multivariate Analysis of Variance for
Goal-Setting Behavior Scores
(Number Set, Attained Quotient, Excess
Quotient, Confidence)

Source	df	F	p<
Treatment			
Goal Setting vs. Conference Only	4,28	.45	.77
Previous Level of Achievement	8,56	4.7	.0002*
Treatment by Previous Achievement	8,56	.57	.79

* Significant at the .05 level.

revealed a significant effect (using a .05/4 = .0125 significance level) only for the attained quotient. Because the distributions of the two quotients were found to be extremely non-normal, various transformations of these scores, manipulating normality and stability of variance, were examined with univariate analyses. The results were substantially unchanged, with the attained quotient yielding significant differences due to previous level of achievement. Analyses based on Scheffe's post hoc comparison method (Hays, 1963) showed the high previous level of achievement to be significantly different ($p < .05$) from the medium level, and the medium previous level of achievement to be significantly different from the low level. Means for the attained and excess quotients are graphed in Figure 3. Excess is included because it is conceptually related to the attained quotient. Figure 3 illustrates that the two measures of goal-setting accuracy (the attained and excess quotients) yielded very different relationships between the three levels of previous achievement.

Summary of Results

No significant differences in terms of attitude, self-esteem, achievement, or goal-setting behavior were found for the effect of treatment or the interaction of treatment by previous level of achievement. Previous level of achievement had a significant effect on each of the four measures.

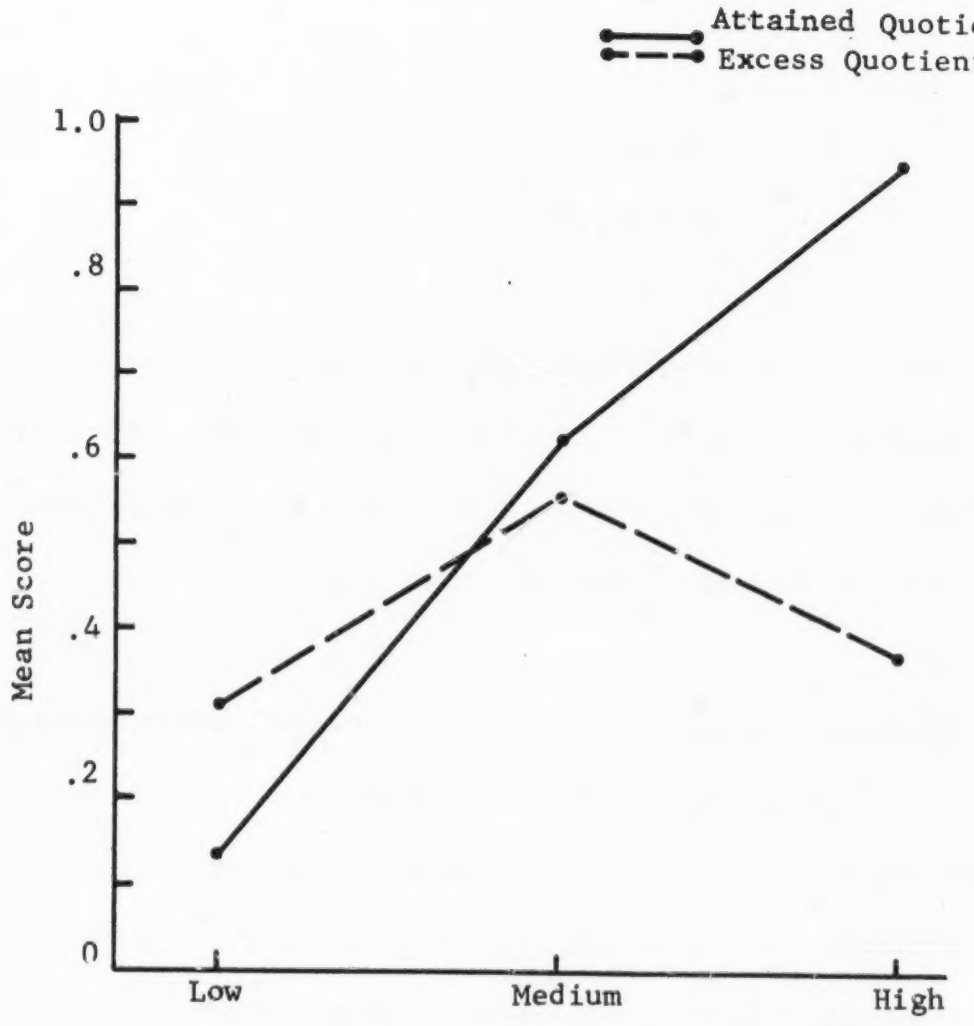

Fig. 3. Mean attained quotient and excess quotient scores by previous level of achievement.

Chapter V

DISCUSSION

The present study examined the effects of goal-setting conferences on student attitudes, self-esteem, achievement, and goal-setting behavior. These conferences were compared to conferences without goal setting and to a control group.

Attitude

It was hypothesized that the goal-setting group would exhibit a more positive attitude than either the conference-only or control group and that the difference between the treatment groups, in terms of attitude, would be smaller among low achievers than among high achievers. Neither hypothesis was borne out by analyses of the effects of treatment and of the interaction of treatment by previous level of achievement. The lack of treatment or interaction effect on attitude should not be considered too surprising, given the limited duration of the experiment and the brevity of the measuring instrument.

Previous level of achievement did exert a significant effect ($p < .05$) on attitude. This is especially interesting in light

of the fact that Gaa (1970) did not observe such an effect and Kennedy (1968) obtained significance only at the .10 level.

Self-Esteem

A univariate analysis of the Self-Esteem Measure derived similar results to those found for attitude. The hypotheses that the goal-setting treatment would result in a more positive attitude and that this would interact with previous achievement were not supported at the .05 level. Again, this is not difficult to explain, given the brief treatment period.

Significant differences were found for SEM scores as a function of previous level of achievement alone. This effect would be expected, because the SEM was designed so to emphasize academic self-esteem. It is not really surprising to find a relationship between academic self-esteem and previous level of achievement in reading. It is also unsurprising that the high achievement level had the highest mean SEM score. It is, however, interesting that the medium achievement group showed the lowest mean SEM score.

Achievement

The hypotheses that the goal-setting group would have a higher mean WTRSD score than the conference-only and control groups and that this treatment effect would be greater among higher achievers did not receive substantiation. A careful examination of the mean scores indicates that the goal-setting treatment may have needed

several more weeks to show effects. The goal-setting group had the lowest mean score for syllabication, was between the other two groups for accent, and had the highest mean score for schwa. Considering the fact that the order of instructional presentation was syllabication, accent, and schwa, one might infer that the advantages of goal-setting conferences were only beginning to emerge by the end of the treatment period. On the other hand, univariate analysis indicated no significant differences for schwa alone in a comparison of goal setting and the other two treatments ($p < .26$). Furthermore, schwa is the least meaningful index of the effect of treatment on achievement, because Ss received less than one week of instruction on this skill.

The multivariate analysis did reveal a significant difference in WTRSD scores due to the effect of previous level of achievement. This, however, would be expected. Nevertheless, it does validate achievement as the basis for stratification.

Goal-Setting Behavior

It was hypothesized that the goal-setting group would set a smaller number of goals, show greater goal-setting accuracy, and show lower confidence than would the conference-only group. No hypothesis was made with respect to the effect of previous level of achievement on goal-setting behavior. The multivariate analysis found no significant effect due to either treatment or the interaction of treatment by previous achievement. There was, however,

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a significant difference in goal-setting behavior due to previous level of achievement.

Univariate analyses of each of the goal-setting measures revealed a significant difference among achievement levels only on the attained quotient. Post hoc comparisons showed higher achievers to have significantly higher attained quotients. It is quite possible that this relation between achievement and the attained quotient is due more to the ability to achieve goals than it is to the ability to set goals accurately. If the high achievers were as precise in their goal setting as the mean attained quotients suggest, then they would also be superior in terms of the excess quotient. In fact, however, there were no significant differences among groups on the excess quotient. The best explanation is that both quotients are reflecting the ability to attain goals. Higher achievers would have a higher attained quotient because they would normally attain a greater percentage of any given set of goals. On the other hand, the low achievers are likely to have the smallest number of attained goals that were not set (excess), simply because they would attain fewer goals.

A comparison between this study and the Gaa (1970) study reveals different results for goal-setting behavior. The only significant differences in goal-setting behavior in the present study were due to previous level of achievement, whereas the only effect on goal-setting behavior in the Gaa study was due to treatment. The effect of previous level of achievement in the present study

could be dismissed as trivial if one assumes that the attained quotient (which Gaa did not use) measures goal attainment more so than goal-setting accuracy. Goal attainment would obviously be related to previous level of achievement. The significant multivariate effect of previous level of achievement on goal-setting behavior might then be attributed to a powerful, but trivial, relation between the attained quotient and previous level of achievement.

The different treatment results are more difficult to explain. Both studies found that the goal-setting group set less goals and expressed less confidence. That is, the differences in these means were in the same direction for both studies, but reached significance only in the Gaa study. The studies are difficult to compare in terms of goal-setting accuracy, because they used incommensurable measurements of accuracy. That is, the present study used two quotients (I/S and (A-I)/A), whereas the Gaa study used the absolute difference between the number of goals set and the number of goals attained (S-A). However, it was possible to analyze the data of the present study in terms of Gaa's definition of accuracy (S-A). When this was done, the goal-setting group was found to be more accurate in its goal-setting, but the differences between the groups was not significant at the .05 level. In general then, the difference between means for goal-setting behavior were in the same direction for the two studies. Only in Gaa's study, however, did these differences reach significance.

Limitations of the Experiment

The major consideration that must underlie analysis of this experiment is an understanding of the differences between the procedures used here and those that would normally be used in goal-setting conferences. First of all, reinforcement in the conferences would not be limited to the accuracy of the student's goal setting. Students would normally be reinforced for all goals that they achieve. Furthermore, the conference monitor would usually be a teacher or an aide who would have more contact with students in the classroom than did the monitor of this study. The effects of the treatments used here should therefore not be taken as representative of the usual goal-setting procedure.

The common problems of applied experimentation in schools were fully relevant here. Weather, travel, absentees, scheduling, communication among students and school staff, and competition with the school routine were among the unmeasurable mitigating factors. There were also practical limitations to the number of Ss that could be included and the duration of the experimental period. The limited sample size is a factor contributing to the relatively large standard errors. This decreases the likelihood of significant differences. The four-week experimental period is quite short in relation to the stability of several of the dependent variables (attitude, self-esteem, and achievement).

It should also be noted that the power of the treatment was effectively decreased during Week 5 when goal-setting behavior was measured. Constraints on the monitor's time prevented inclusion of control Ss in the Week 5 conferences. This means that the only comparison for goal-setting behavior was between conferences with goal setting and conferences without goal setting. The effects of conferences themselves could not be measured in terms of goal-setting behavior.

One of the most difficult factors to evaluate is the extent to which the dependent measures were sensitive to the effects of the treatment. Of the instruments used at the end of Week 4, only the WTRSD tests were of well-established reliability and validity. The RAI and SEM had been used previously only in a pilot study.

The instruments used to measure goal-setting behavior consisted of the Student Goal-Setting Checklist, the Checklist for Teacher Evaluation of Goals Attained, and the Goal-Setting Confidence Rating Scale. The confidence rating scale was identical to that used by Gaa (1970). Its simplicity and tangential relevance to this study minimize our concern for its sensitivity.

The goal-setting checklist and teacher evaluation checklist, on the other hand, are of central importance. They were the direct measures of goal-setting behavior, from which the number of goals set, attained quotient, and excess quotient were derived. The goal-setting checklist and teacher evaluation checklist are identical,

except for their headings. A major concern is the extent to which the goals on these checklists represented what was taught. The experimenter's observations of classroom instruction indicated that the instruction did follow these checklists quite closely. This is not surprising, considering the fact that the teachers played a major role in designing the checklists. In addition, the means for the number of goals attained per week by previous level of achievement (9 for high achievers, 7.75 for medium achievers, and 6.5 for low achievers) suggest that students of all abilities were able to attain a reasonable number of goals as evaluated by the teachers.

Another consideration is the extent to which the teachers used the teacher evaluation checklist consistently. An examination of the mean number of goals attained by achievement level each week indicates that there was a sharp drop in the number of goals attained after Week 1. Presumably this was due to the ease with which some of the first goals could be attained. Furthermore, during Week 4, the relation between previous level of achievement and number of goals attained was reversed, whereas during Week 5 this relation was reversed back again, but became quite exaggerated (the high achievers attained much more than the medium and low achievers combined). Compounded with these inconsistencies was the predictable variation among teachers. This is especially relevant in consideration of the fact that Ss changed teachers each week. It is evident, then,

that one source of the failure of the goal-setting group to increase its goal-setting accuracy was the lack of consistency in the teacher evaluations of number of goals attained.

A final issue concerns the extent to which Ss were able to make reasonable progress as measured by the WTRSD achievement tests. Unless reasonable progress was possible, treatment differences in terms of WTRSD scores would be suppressed. The two variables of concern here are the instruction provided and the level of difficulty of the skills studied. Two considerations relating to instruction involve the extent to which the instruction was directed toward the content of the WTRSD tests and the degree of instructional flexibility allowing Ss to progress at their own pace. A correlation of .33 was found between the cumulative number of goals attained by the end of Week 4 and WTRSD scores. Given the previously discussed conclusion that the goals were representative of instruction, this low correlation indicates a lack of fit of the classroom instruction to the content of the WTRSD tests, or simply a low reliability of the teacher evaluations of goals attained. Instructional flexibility can be judged more conclusively. The description of instruction in Chapter III reveals that there was extensive ability grouping and regrouping throughout the experiment. Both the goal-setting and conference-only groups averaged 4 ability group changes per week. It is therefore safe to conclude that Ss could move at their own pace.

The appropriateness of the level of difficulty of the WTRSD tests is more difficult to assess. If Ss were unprepared for these skills, they may have been unable to make progress regardless of the nature of the instruction. In retrospect, it is unfortunate that the parallel form 1 of the WTRSD was not given as a pretest. This would have allowed for the calculation of gain scores, showing how much S had been able to learn during the experimental period.

An examination of the number of Ss that reached the WTRSD 80 percent criterion for mastery suggests that syllabication was the only skill of the three that provided an appropriate level of difficulty. Of the 54 Ss, 32 passed syllabication, 5 passed accent, and 5 passed schwa. However, it is unlikely that even syllabication was appropriate for all three levels of previous level of achievement. Of the 18 Ss at each level of previous achievement, only one high achiever failed to reach mastery, while 8 medium achievers and 13 low achievers failed to reach mastery. Apparently, syllabication was not sufficiently difficult for high achievers, yet excessively difficult for low achievers.

It should be noted that if syllabication was the most appropriate of the three skills, this did not seem to elicit treatment effects. The goal-setting group had the lowest mean score on syllabication at all three levels of previous achievement. No differences between the treatment groups proved significant in univariate analysis of syllabication scores.

Conclusions

Valuable contrasts can be made between this experiment and the Gaa (1970) study. The designs of the two experiments are comparable, yet only the Gaa study found treatment effects on achievement and goal-setting behavior. It may be assumed that methodological differences between the experiments are related to the different results.

The Ss of the two studies were of similar socioeconomic status. Gaa reported that his Ss were white students from an "upper lower-class neighborhood," with 30 percent receiving welfare and 50 percent from broken homes. As described previously, 20 percent of the Ss in the present study were from broken homes, while at least one parent was employed in 90 percent of the homes. Although this indicates that Ss in the present study were of a slightly higher socioeconomic status than those of Gaa's study, the difference is not great. Certainly, it appears unlikely that the lack of treatment results in the present study can be attributed to the socioeconomic status of the Ss.

A major methodological difference between the studies was the nature of the reinforcement provided in goal-setting conferences. The present experiment limited reinforcement strictly to accurately set goals. That is, there was reinforcement for specific goals attained only if they had also been set. Otherwise, Ss received only neutral feedback. Gaa reinforced Ss for any achievement in addition to reinforcing for accuracy itself.

A related methodological difference was the greater emphasis of the Gaa study on feedback concerning performance independent of goals. This is especially significant in that Gaa suggests that this feedback was critical to the significant treatment effect on achievement. The Gaa study was actually two studies, one at the fourth grade level (as the present study) and one at the second grade level. Both groups showed a treatment effect on goal-setting behavior, but the effect on achievement occurred only at the second grade level. Gaa reported that the major difference between the two groups was that the second graders received more feedback concerning performance. Feedback comparing previously set goals to performance remained the same.

The present study shows that reinforcement for goal-setting accuracy is ineffective when isolated, while Gaa's results suggest that reinforcement for performance and feedback concerning performance are critical to the effectiveness of goal-setting conferences. Reinforcement contingent upon accurate goal-setting would increase achievement by increasing S's commitment to his goals. It is possible, however, that commitment to goals is more effectively enhanced with reinforcement and feedback for performance. This suggests that the conference monitor could ignore S's goals, concentrating on S's performance. In fact, Bayton (1948) found that goal setting improves performance even when S's goals are kept private. It may therefore be possible to provide reinforcement and feedback with

reference to a list of specific goals, assuming that S will set his own goals, but ignoring what those goals might be. Besides streamlining the conference procedure, this would avoid discouraging the challenging goal-setting that previously discussed literature relates to high achievement. That is, the ambitious S would not constantly be reminded that he is reaching only half his goals.

A second contrast between the present study and Gaa's study concerns the characteristics of the conference monitor. The present study hired a mother from the local neighborhood. She had excellent rapport with Ss, but was not familiar with classroom activities. A careful evaluation of the monitor's performance in the present study revealed that her major weaknesses were in reviewing skills and providing detailed feedback. Gaa, as the experimenter, conducted his own conferences. He observed the classes of his Ss as part of the study, thereby gaining some knowledge that could be used to enhance the feedback he provided. It would probably be advantageous to use only teachers or their aides to conduct goal-setting conferences. This would insure familiarity with instruction, the skills themselves, and the abilities of each child. It should be noted that Kennedy (1968) did use teachers in goal-setting conferences, yet found no treatment effect on achievement. This suggests that successful goal-setting conferences are not guaranteed when teachers conduct the conferences. All variables must be considered.

One last contrast between the present study and Gaa's study considers the relevance of previous level of achievement. Whereas the present experiment found attitude, self-esteem, and goal-setting behavior significantly related to previous achievement, Gaa found none of these relations. Gaa's attitude measures may have been less sensitive than that of the present study. No measure of self-esteem was used in the Gaa study. The significant difference in goal-setting behavior due to previous level of achievement may be attributable, as discussed previously, to a trivial relation to the present study's attained quotient and previous achievement. In summary, the relevance of previous level of achievement has been demonstrated in relation to effective variables such as attitude and self-esteem. It would therefore be advisable for conference monitors to be aware of the previous level of achievement of each student and the possible affective correlates of previous achievement.

Future Research

Several variables might be explored in future research. First of all, goal setting should be tested over a longer period of time. The ultimate objective should be to instill a sense of purpose and specific self-direction in the student. This could not be expected to occur within a five-week period. Furthermore, changes in variables such as attitude, self-esteem, and achievement would usually require longer than four weeks.

In addition, experimentation should be performed to compare different forms of reinforcement. It would be advantageous to include both reinforcement for performance and reinforcement for both accuracy and performance in the same experiment. This might determine more conclusively whether the monitor should reinforce for accuracy at all. A related inquiry might consider whether the goals need to be stated. This would be a comparison between explicit goal setting, as in the present study, and implicit goal setting, where the monitor provided feedback and reinforcement without asking S to select goals. It would be assumed that S would have his own goals in mind, as facilitated by the list of specific skills.

Another line of experimentation might examine the effects of different monitors. This has never been done in the same experiment. It would be valuable to know just how much difference there is between teachers, aides, and neighborhood parents in terms of monitoring. This issue has important implications for the cost of providing goal-setting conferences.

A related consideration is the extent to which goal setting should be integrated with classroom activities. This includes not only the degree to which the monitor is involved with the class, but the extent to which the student should be given extra time to spend working toward his own goals.

A final research issue is the differential effects of goal-setting according to the previous level of achievement of the student. Future research should give special attention to the affective correlates of previous level of achievement, examining possible interactions of treatment by previous achievement. This might involve a combination of the attitude measures of the present study with the treatment of the Gaa study.

Summary

The effects of four weeks of goal-setting practice were examined. Three treatment groups, goal setting, conference only, and control, were compared in terms of attitude, self-esteem, and achievement at the end of Week 4. The goal-setting behavior of the goal-setting and conference-only groups was measured during Week 5. Ss were stratified into high, medium, and low levels of previous achievement.

Analyses of variance revealed no significant differences due to treatment or the interaction of treatment by previous level of achievement. Previous level of achievement alone proved to have a significant effect on attitude, self-esteem, achievement, and goal-setting behavior.

The most important conclusions derived from the experiment relate to reinforcement, monitoring, and the effects of previous level of achievement. It is suggested that reinforcement for accuracy per se may not be necessary in goal-setting conferences.

There is even a possibility that explicit commitment to goals is not crucial to the goal-setting process. Observations of the present experiment and comparisons with other studies indicate that the conference monitor should be a teacher or an aide. This would insure familiarity with classroom activities and the capabilities of each student. No firm conclusions can be drawn regarding the differential effects of goal setting by previous level of achievement. However, this study does suggest that previous achievement is a critical variable. It is suggested that future research investigate the roles of reinforcement, monitor characteristics, and previous achievement in the goal-setting process.

APPENDIX A

Student Goal-Setting Checklist

Student Goal-Setting Checklist

Student's Name:

Date:

WHICH OF THESE WILL YOU BE ABLE TO DO BY A WEEK FROM TODAY?

Goal List for Syllabication

☐ 1. I know what a syllable is.

☐ 2. I know how a dictionary shows the syllables in a word.

3. If I am given a list of words, I can pick out all the words that have 2 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

4. If I am given a list of words, I can pick out all the words that have 3 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

5. If I am given a list of words, I can pick out all the words that have 4 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

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6. If I am given a sentence, I can pick out all the words that have 2 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

7. If I am given a sentence, I can pick out all the words that have 3 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

8. If I am given a sentence, I can pick out all the words that have 4 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

9. If I am given <u>any</u> word, I can tell how many syllables it has.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

☐ 10. I know the <u>vowel-sounds</u> rule for finding how many syllables a word has.

☐ 11. I know the <u>vowel</u>/<u>consonant-vowel</u> rule for breaking words into syllables.

☐ 12. I know the <u>vowel-consonant</u>/<u>consonant-vowel</u> rule for breaking words into syllables.

☐ 13. I know the <u>consonant-"le</u>" rule for breaking words into syllables.

14. If I am given a word, I can choose from answer choices the one with the syllables divided the correct way.

- ☐ Some of the time.
- ☐ Most of the time.
- ☐ Almost all of the time.

15. If I am given a word, I can divide it into the correct syllables by drawing lines between the syllables.

- ☐ Some of the time.
- ☐ Most of the time.
- ☐ Almost all of the time.

Goal List for Accent

☐ 1. I know what "accent" means in relation to a word.

☐ 2. I know how a dictionary shows the accent mark for a word.

3. If I am shown a list of words, I can pick out those words with the accent on the first syllable.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

4. If I am shown a list of words, I can pick out those words with the accent on the second syllable.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

5. If I am shown <u>any</u> word, I can tell which syllable has the accent.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

6. I can make a list of words which have the accent on the first syllable.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

7. I can make a list of words which have the accent on the second syllable.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

8. I can make a list of words with the accent on any given syllable.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

☐ 9. I know the prefix and suffix generalization for accents.

10. If I am given a sentence, I can tell which syllable is accented for all the words in the sentence which have more than one syllable.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

Goal List for the Schwa

☐ 1. I know the sound of the schwa.

☐ 2. I know the dictionary symbol for the schwa.

☐ 3. I know the schwa rule for accented syllables.

4. If I am given a list of words, I can pick out those words which have the schwa and say the part of the word that has the schwa.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

5. If I am given a sentence, I can tell whether any of the words have the schwa.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

APPENDIX B

Goal Reminder Sheet for Student-Set Goals

Goal Reminder Sheet
for Student-Set Goals

Student's Name:

Date:

THESE ARE THE GOALS YOU HAVE CHECKED FOR THIS WEEK. YOU SHOULD TRY TO LEARN TO DO THESE BY THE END OF THE WEEK.

Goal List for Syllabication

☐ 1. I know what a syllable is.

☐ 2. I know how a dictionary shows the syllables in a word.

3. If I am given a list of words, I can pick out all the words that have 2 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

4. If I am given a list of words, I can pick out all the words that have 3 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

5. If I am given a list of words, I can pick out all the words that have 4 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

APPENDIX C

Checklist for Teacher Evaluation of Goals Attained

Checklist for
Teacher Evaluation of Goals Attained

Student's Name:

Date:

WHICH OF THESE HAS THE STUDENT BEEN ABLE TO ACCOMPLISH DURING THE PAST WEEK?

Goal List for Syllabication

☐ 1. I know what a syllable is.

☐ 2. I know how a dictionary shows the syllables in a word.

3. If I am given a list of words, I can pick out all the words that have 2 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

4. If I am given a list of words, I can pick out all the words that have 3 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

5. If I am given a list of words, I can pick out all the words that have 4 syllables.

   ☐ Some of the time.

   ☐ Most of the time.

   ☐ Almost all of the time.

APPENDIX D

Goal-Setting Confidence Rating Scale

Goal-Setting Confidence Rating Scale

Name:

Date:

THINK ABOUT THE GOALS YOU HAVE CHECKED FOR THIS COMING WEEK AND ANSWER THESE QUESTIONS.

1. How certain are you that you will reach the goals you have set?

- ☐ I am very sure I will.
- ☐ I am pretty sure I will.
- ☐ I think I will.
- ☐ I don't know if I will.
- ☐ I don't think I will

2. How well will you learn the skills?

- ☐ I will be able to do them without help.
- ☐ I will be able to do them with some help.
- ☐ I will be able to do them only if someone helps me.
- ☐ I don't know.
- ☐ I won't be able to do them.

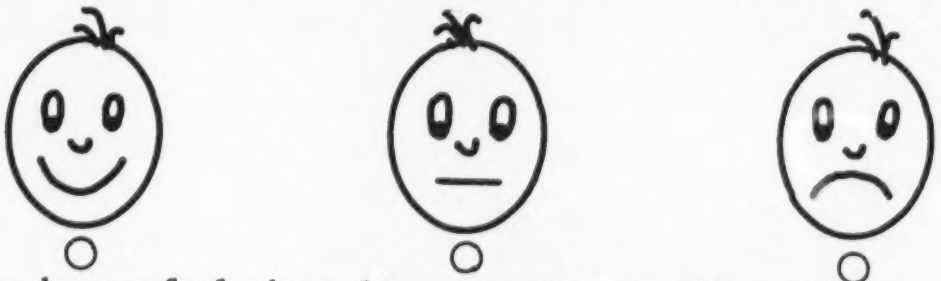
APPENDIX E

Reading Attitude Inventory

Name_____

1. How do you feel about reading at school?

2. How do you feel about reading when you are not at school?



3. How do you feel about learning about reading skills?

APPENDIX F

Self-Esteem Measure

Name_____

SAMPLES:	I like ice cream.	YES ○	NO ○
	I don't like green.	YES ○	NO ○
1.	I'm doing the best work that I can.	YES ○ 2[a]	NO ○ 1
2.	I am a good reader	YES ○ 2	NO ○ 1
3.	Lots of times, I don't know why I do things.	YES ○ 3	NO ○ 2
4.	I work on something until I finish it.	YES ○ 3	NO ○ 1
5.	I can't get things done on time.	YES ○ 2	NO ○ 2
6.	I can make up my mind and stick to it.	YES ○ 3	NO ○ 2
7.	I'm not doing as well in school as I'd like to.	YES ○ 2	NO ○ 2
8.	I am good in my school work.	YES ○ 3	NO ○ 1

9. I can usually finish what I start.	YES ○ 3	NO ○ 1
10. Someone always has to tell me what to do.	YES ○ 1	NO ○ 3
11. I'm proud of my school work.	YES ○ 3	NO ○ 1
12. I forget what I learn.	YES ○ 1	NO ○ 3

[a]The numbers given below the "yes" and "no" response positions indicate the weights used for scoring that response.

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APPENDIX G

Testing Instructions

Testing Instructions (RAI and SEM)

Subjects will be tested in groups of about ten each. Testing will take place in comfortably large rooms. The testing will be conducted entirely with University personnel.

GOOD MORNING. I AM FROM THE UNIVERSITY OF WISCONSIN IN MADISON. WE ARE HERE, TODAY, TO FIND OUT HOW STUDENTS FEEL ABOUT SCHOOL AND ABOUT SOME OF THE THINGS THEY ARE STUDYING. I HAVE SOME QUESTIONS WHICH I WOULD LIKE YOU TO ANSWER HONESTLY. IT IS IMPORTANT THAT YOU ANSWER THE WAY <u>YOU</u> REALLY FEEL. THERE ARE NO RIGHT OR WRONG ANSWERS. ALSO, YOUR TEACHER WILL NOT SEE WHAT ANY OF YOU HAVE WRITTEN. I AM GOING TO BE THE ONLY ONE TO SEE YOUR ANSWERS. JUST MARK THE QUESTIONS ACCORDING TO THE WAY YOU USUALLY FEEL.

The tester will then check for pencils, pass out the questionnaires (RAI), and instruct on filling in names:

PLEASE PUT YOUR NAME ON THE LINE AT THE TOP OF THE PAGE.

Next the tester will explain how to mark the items (on the RAI).

THERE ARE THREE FACES HERE. THE FIRST ONE IS HAPPY, THE SECOND ONE IS NEITHER HAPPY NOR SAD, AND THE THIRD FACE IS SAD. FILL IN THE CIRCLE UNDER THE FACE THAT SHOWS HOW YOU FEEL ABOUT EACH QUESTION. FOR EXAMPLE, QUESTION NUMBER ONE IS, "HOW DO YOU FEEL ABOUT READING AT SCHOOL?" NOW YOU TELL HOW YOU FEEL ABOUT READING AT SCHOOL. IF YOU FEEL HAPPY, FILL IN THE CIRCLE UNDER THE FIRST FACE; IF YOU DON'T FEEL HAPPY OR SAD, FILL IN THE CIRCLE UNDER THE SECOND FACE; IF YOU FEEL SAD, FILL IN THE CIRCLE UNDER THE THIRD FACE. I WILL READ EACH QUESTION TO YOU AS WE GO. ARE THERE ANY QUESTIONS?

The tester will proceed to read each question, emphasizing the number of each question.

For question number three, after reading the question, the tester will say:

"THE LAST SKILLS YOU STUDIED WERE SYLLABICATION AND ACCENT. HOW DID YOU FEEL ABOUT LEARNING ABOUT SYLLABICATION AND ACCENT?"

When the RAI is completed, the questionnaires will be collected and the tester will say:

I HAVE A FEW MORE QUESTIONS THAT I WOULD LIKE YOU TO ANSWER SO THAT I CAN FIND OUT HOW STUDENTS REALLY FEEL ABOUT THEMSELVES. AGAIN, I WOULD LIKE YOU TO ANSWER THESE ACCORDING TO THE WAY YOU REALLY FEEL. YOU SHOULD NOT BE THINKING ABOUT WHAT YOU WANT TO BE LIKE; JUST TELL ME HOW YOU REALLY THINK YOU ARE. AS ON THE OTHER QUESTIONS, THERE ARE NO RIGHT OR WRONG ANSWERS, AND YOUR TEACHER WILL NOT SEE WHAT YOU HAVE WRITTEN.

Pass out the questionnaires (SEM).

PUT YOUR NAME ON THE LINE AT THE TOP OF THE PAGE.

I WANT TO KNOW IF YOU THINK THESE QUESTIONS TELL ABOUT YOU. IF A QUESTION TELLS ABOUT YOU, FILL IN THE CIRCLE UNDER THE "YES" IN THE SAME ROW AS THAT QUESTION. IF A QUESTION DOES NOT TELL ABOUT YOU, FILL IN THE CIRCLE UNDER THE "NO" IN THE SAME ROW AS THAT QUESTION. FILL IN ONLY ONE CIRCLE FOR EACH QUESTION.

FIRST, LET'S LOOK AT THE TWO SAMPLE QUESTIONS AT THE TOP OF THE PAGE. THE FIRST ONE SAYS "I LIKE ICE CREAM." IF YOU LIKE ICE CREAM, FILL IN THE CIRCLE UNDER "YES" FOR THAT QUESTION. IF YOU DO NOT LIKE ICE CREAM, FILL IN THE CIRCLE UNDER "NO" FOR THAT QUESTION. THE SECOND QUESTION SAYS

"I DON'T LIKE GREEN." IF YOU DON'T LIKE GREEN, FILL IN THE "YES" CIRCLE. IF YOU DO LIKE GREEN, FILL IN THE "NO" CIRCLE.

ARE THERE ANY QUESTIONS? ALL RIGHT, LET'S BEGIN.

The tester will read each question twice, emphasizing the number of each question. After reading a question, the tester will say CHOOSE EITHER "YES" OR "NO."

APPENDIX H

Conference Evaluation Checklists

Conference Evaluation
Checklist

INTRODUCTORY GOAL-SETTING CONFERENCE CHECKLIST

- ☐ Say "Hi" and explain that "we" will be meeting to set goals in the coming weeks.
- ☐ Introduce the concept of goals and goal setting.
  - ☐ Define goal setting. ("Goal setting is deciding that you want to do something and then trying very hard to do it.")
  - ☐ Give examples of goal setting. Relate these to the child's own interests.
  - ☐ Ask the child for examples of goals (if the child is unable to give examples, proceed to summary definition).
  - ☐ Give summary definition of goal setting.
- ☐ Discuss the skills that the student's class will be working on during the following weeks.
  - ☐ Name the skills.
  - ☐ Discuss syllabication. (In Week 5 introductory conferences a different skill will be appropriate, depending on the child.)
    - ☐ Explain the skill briefly.
    - ☐ Give examples of it (always the same examples).
    - ☐ Ask for examples of the new skill.
- ☐ Set goals for the next week.
  - ☐ Allow the child to see the goal list as it is read.
  - ☐ After reading a basic goal, ask the child whether he believes that he can reach the goal during the following week.
  - ☐ If he says he can (and only if he says he can), ask him whether he will do this (the goal) "Some of the time, most of the time, or almost all of the time" (this is not included under some goals).
  - ☐ After the child has rejected three consecutive goals, terminate the goal setting.

- ☐ There must be no reinforcement during the goal setting itself; the monitor must be completely neutral regarding which and how many goals the child selects, except for the following:
  - ☐ The importance of being able to reach all the goals set should be emphasized during the goal setting as is appropriate.

☐ Fill out confidence rating sheet.

- ☐ Allow child to see goal list as the monitor reads it.
- ☐ Monitor reads each question with the answer choices, then fills in the child's verbal answers.

☐ Fill out reminder sheet.

- ☐ Give it to the child.
- ☐ Remind him that this is what he'll be working on during the coming week.

☐ Conclude the conference with an encouragement such as "Do your best and be sure to reach all your goals."

Conference Evaluation
Checklist

FEEDBACK GOAL-SETTING CONFERENCE CHECKLIST

☐ Say "hi" and explain that "we" will be reviewing how "you" did on the goals you set last week, as well as setting some new goals.

☐ Provide feedback and reinforcement on the previous week of goal setting.

☐ Compare last week's goal-setting checklist to the teacher evaluation sheet for the child.

☐ Reinforce the child ("That is very good") for each goal that he set and achieved. Do not worry about "Most" versus "Almost all" differences.

☐ Point out every goal that was set and not achieved, suggesting that this week "we" should set less goals and work harder on them so that "we" will be sure to reach every goal set.

☐ Point out every goal that was achieved but not set, suggesting that this week "we" should set more goals.

☐ Briefly review any new skills that the child may be working on.

☐ Judge which skills (besides the first week's skill) the child will be working on by inferring from the teacher evaluation checklist for the previous week.

☐ Explain any new skill briefly.

☐ Give examples of it (always the same examples).

☐ Ask for examples of the new skill.

☐ Set goals for the next week.

☐ Omit goals that have already been achieved at least "Most of the time."

☐ Allow the child to see the goal list as it is read.

☐ After reading a basic goal, ask the child whether he believes that he can reach that goal during the following week.

☐ <u>If</u> he says he can (and only if he says he can), ask him whether he will do this (the goal) "Some of the time, most of the time, or almost all of the time" (this is not included under some goals).

- ☐ After the child has rejected three consecutive goals, terminate the goal setting.
- ☐ There must be no reinforcement during the goal setting itself; the monitor must be completely neutral regarding which and how many goals the child selects, except for the following:
  - ☐ The importance of being able to reach all the goals set should be emphasized during the goal setting as is appropriate.
  - ☐ The child should be reminded as to how his previous week's goals compared to his previous week's performance.

☐ Fill out confidence rating sheet.

- ☐ Allow child to see goal list as the monitor reads it.
- ☐ Monitor reads each question with the answer choices, then fills in the child's verbal answers.

☐ Fill out reminder sheet.

- ☐ Give it to the child.
- ☐ Remind him that this is what he'll be working on during the coming week.

☐ Conclude the conference with an encouragement such as "Do your best and be sure to reach all your goals."

Conference Evaluation Checklist

CONFERENCE WITHOUT GOALS CHECKLIST

- ☐ Say "Hi" and ask the child how he has been since "I saw you last week."
- ☐ Socialize with the child, showing interest and warmth.
- ☐ Ask the child what the last skill (syllabication, accent, or schwa) was that he worked on in his reading skills class. (At the monitor's discretion, this may be judged from the teacher evaluation sheet which is available for that child.)
  - ☐ Discuss that skill.
    - ☐ Explain the skill briefly.
    - ☐ Give examples of it.
    - ☐ Ask for examples of the skill.
- ☐ At no time should the conference monitor refer to any of the specific goals of the goal-setting list.
- ☐ Conclude the conference with an encouragement such as "Do your best this week."

REFERENCES

Alschuler, A. S. How to increase motivation through climate and structure. Achievement Motivation Development Project Working Paper No. 8, Harvard University, Graduate School of Education, 1968. (Maehr, M. L., & Sjogren, D. D. Atkinson's theory of achievement motivation: First step toward a theory of academic motivation? Review of Educational Research, 1971, 41 (2), 143-161).

Atkinson, J. W., & Feather, N. T. (Eds.) A theory of achievement motivation. New York: John Wiley & Sons, 1966.

Ausubel, D. P., & Robinson, F. G. School learning. New York: Holt, Rinehart and Winston, 1969.

Baker, F. B. FORTAP: A FORTRAN test analysis package. Madison: Laboratory of Experimental Design, Department of Educational Psychology, The University of Wisconsin, 1969.

Bayton, J. A. Performance as a function of expressed and non-expressed levels of aspiration. American Psychologist, 1948, 3, 274. (Abstract)

Bower, W. S., Boyer, J. L., & Scheirer, E. A. Research related to academic achievement motivation: An illustrative review. Theory into Practice, 1970, 9 (1), 33-46.

Brackbill, Y. Infancy and early childhood. New York: The Free Press, 1967.

Clifford, M. M. Effects of competition on performance, interest, and retention with the use of a fifth-grade vocabulary-learning task. Unpublished doctoral dissertation, University of Wisconsin, 1970.

Clifford, M. M., & Cleary, T. A. Effects of competition on fifth and sixth graders. Paper presented at the meeting of the American Psychological Association, Miami Beach, September, 1970.

Cogan, M. L. The behavior of teachers and the productive behavior of their pupils. Journal of Experimental Education, 1958, 27, 89-124.

Coopersmith, S. The antecedents of self-esteem. San Francisco: W. H. Freeman, 1967.

Frymier, J. R. Motivation: The mainspring and gyroscope of learning. Theory into Practice, 1970, 9 (1), 23-32.

Gaa, J. P. Goal-setting behavior, achievement in reading, and attitude toward reading associated with individual goal-setting conferences. Technical Report from The Wisconsin Research and Development Center for Cognitive Learning, The University of Wisconsin, 1970, No. 142.

Gordon, I. J. How I See Myself Scale. Gainesville: Florida Educational Research and Development Council, University of Florida, 1970.

Hays, W. L. Statistics. New York: Holt, Rinehart and Winston, 1963.

Kennedy, B. J. Motivational effects of individual conferences and goal setting on performance and attitudes in arithmetic. Technical Report from the Wisconsin Research and Development Center for Cognitive Learning, The University of Wisconsin, 1968, No. 61.

Kiesler, C. A., Collins, B. E., & Miller, N. Attitude change. New York: John Wiley & Sons, 1969.

Klausmeier, H. J., Quilling, M., & Wardrop, J. L. Research and development activities in R & I units of five elementary schools of Racine, Wisconsin. Technical Report from the Wisconsin Research and Development Center for Cognitive Learning, The University of Wisconsin, 1968, No. 52.

Klausmeier, H. J., Schwenn, E. A., & Lamal, P. A. A system of individually guided motivation. Practical Paper from the Wisconsin Research and Development Center for Cognitive Learning, The University of Wisconsin, 1970, No. 9.

Korman, A. K. Task success, task popularity, and self-esteem as influences on task liking. Journal of Applied Psychology, 1968, 52, 484-490.

Lefcourt, H. M. Internal versus external control of reinforcement: A review. Psychological Bulletin, 1966, 65, 206-220.

Locke, E. A. Relationship of task success to task liking: A replication. Psychological Reports, 1966, 18, 552-554.

Locke, E. A. Motivational effects of knowledge of results: Knowledge or goal setting? Journal of Applied Psychology, 1967, 51, 324-329.

Locke, E. A., & Bryan, J. F. Cognitive aspects of psychomotor performance: The effects of performance goals on level of performance. Journal of Applied Psychology, 1966, 50, 286-291. (a)

Locke, E. A., & Bryan, J. F. The effects of goal-setting, rule-learning and knowledge of score on performance. American Journal of Psychology, 1966, 79, 451-457. (b)

Locke, E. A., & Bryan, J. F. Grade goals as determinants of academic achievement. The Journal of General Psychology, 1968, 79, 217-228.

Locke, E. A., & Bryan, J. F. Knowledge of score and goal level as determinants of work rate. Journal of Applied Psychology, 1969, 53, 49-65.

Maehr, M. L., & Sjogren, D. D. Atkinson's theory of achievement motivation: First step toward a theory of academic motivation? Review of Educational Research, 1971, 41 (2), 143-161.

Miller, R. G. Simultaneous statistical inference. New York: McGraw-Hill, 1966.

Murphy, G. Motivation: The key to changing educational times. Theory into Practice, 1970, 9 (1), 3-9.

Parker, J. About Me. Statesboro: Georgia Southern College, 1970.

Piers, E. V., & Harris, D. B. The Piers-Harris Children's Self Concept Scale. Nashville: Counselor Records and Tests, 1969.

Porat, A. M., & Haas, J. A. Information effects on decision-making. Behavioral Science, 1969, 14 (2), 98-104.

Schwenn, E. A., Sorenson, J. S., & Bavry, J. The effect of individual adult-child conferences on the independent reading of elementary school children. Technical Report from the Wisconsin Research and Development Center for Cognitive Learning, The University of Wisconsin, 1970, No. 125.

Sears, P. S., & Hilgard, E. R. The teacher's role in the motivation of the learner. In E. R. Hilgard (Ed.) Theories of learning and instruction. The sixty-third yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1964.

Sorenson, J. S., Schwenn, E. A., & Klausmeier, H. J. The individual conference--a motivational device for increasing independent reading in the elementary grades. Practical Paper from The Wisconsin Research and Development Center for Cognitive Learning, The University of Wisconsin, 1969, No. 8.

Sweet, R. C. Educational attainment and attitudes toward school as a function of feedback in the form of teachers' written comments. Technical Report from The Wisconsin Research and Development Center for Cognitive Learning, The University of Wisconsin, 1966, No. 15.

Waetjen, W. B. The teacher and motivation. Theory into Practice, 1970, 9 (1), 10-15.

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